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BOTANICAL TEACHER

FOR

NORTH AMERICA:

IN WHICH ARE DESCRIBED THE

INDIGENOUS AND COMMON EXOTIC
PLANTS,

GROWING NORTH OF THE GULF OF MEXICO.

BY LAURA JOHNSON:

UNDER THE SUPERVISION OF PROF. A. EATON.

THE GENERIC CHARACTERS ARE FROM THE DESCRIPTIONS OF PROF. LINLDEY; THE SPECIFIC ARE GIVEN BY SIGNS AND ABBREVIATIONS. THESE ARE PRECEDED BY A CONDENSED VIEW OF THE ARTIFICIAL METHOD, AND FOLLOWED BY THE NATURAL ONE.

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TO THE

HON. STEPHEN VAN RENSSELAER, LL. D.

HAVING been a member of the Senior Professor's family, at the Rensselaer Institute, for the last five years, and part of that time a pupil of the Troy Female Seminary, I could not resist the desire to enter as an under actor in the fascinating exhibitions of the Natural Sciences. I have therefore labored intensely, more than a year, in preparing this auxiliary treatise. I have endeavored to adapt it to the economical character of American parents and guardians; and to facilitate the progress of the young in one of the departments of knowledge, to which you have devoted much wealth and paternal care.

Whether my time has been usefully employed or not, I hope you will receive this effort as a pledge of my devotion to the cause, which you so munificently patronize.

Permit me to subscribe myself

Your obedient,

Humble servant,

LAURA JOHNSON.

RENSSELAER INSTITUTE, }
Troy, March 10, 1834. }

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P R E F A C E .

SINCE the study of Elementary treatises on Plants, before the student knows the names of several hundred species by the teacher's *dictum* and his own *analyses*, has been rejected by all successful teachers, very different books are required. Full systems of vegetables, giving the generic and specific names of pretty extensive districts, have become indispensable. —The Manual of Botany, (now including the common exotic and indigenous plants from the Gulf of Mexico to Baffin's Bay,) has grown up to its sixth edition, in the service of this method of instruction; and will not probably be superseded by any substitute in the present age. But the expense of that extensive work, (though essential for all teachers, and required for one member of every family,) has prevented parents from entering all the members of large families in botanical schools, in thousands of cases. Or, what is still worse, it has driven teachers to the alternative of breaking down their pupils' zeal in a dull dreary purgatory of hard names; when they ought to have led them *directly* to the Elysian Fields of Flora.

“Begin at the root,” is the common-place advice, which has cost the student great loss of time. To begin with treatises on plants before the plants are known of which we are treating, is like teaching the grammar of the English language, before a word of the language is spoken or understood.

This book is the *totum in parvo* of the Manual of Botany. It contains the Generic and Specific descriptions of all the

plants of the Manual, excepting the orders of Cryptogamia below Ferns. And even these are fully explained under general heads. The concise generic descriptions of Lindley are included at full length ; and all the species are described by convenient abbreviations. But in cases where a genus contains numerous species, or where species approach each other in numerous points, some of the abbreviated descriptions may not be sufficient for the beginner. In such cases the student must resort to the teacher, or to a momentary loan of the Manual, from a fellow student. The following genera are the chief, whose abbreviated specific descriptions may be somewhat defective. Aster, several grasses, Azalea, Carex, Erigeron, several Syngenesia, Hypericum, Oenothera, Polygonum, Potentilla, Quercus, Ranunculus, Salix, Solidago, Trifolium, and Vaccinium.

Botany (like all subjects in Natural History and Chemistry) is, in a great measure, *traditional*. With great diligence we may learn the names of many plants, minerals, and animals, from books: also, many manipulations in chemistry. In Natural History, it has been very justly said: "Systems are but indexes to the Book of Nature." And it is now well known, that under the direction of an experienced Naturalist, or practical Chemist, we can learn, at least, four-fold more in the same time. No one should ever be employed as a teacher of Botany, unless he can give his pupils at sight the names of at least four hundred species of the indigenous plants, growing in the vicinity of his school—and he ought to be able to recognize, from the mere habits of plants, six or eight hundred species.

Botanic gardens are of no use to the student in Botany. He must learn from specimens, taken from the wilds of Na-

ture. Garden culture produces monsters, as intemperance produces monsters in our own species. Therefore the student must collect plants which grow wild in woods, fields, meadows, &c., and preserve them for subjects of revision; as he will be shewn under Directions for Teachers. But he must be daily exercised in the analysis of wild plants before the teacher. In his own room and in the field, he must daily practice in the application of the descriptions in his book, to plants whose generic and specific names are given.

The importance of collecting wild plants and making an herbarium with a student's own hands, can never be fully impressed upon his mind, until he has made the trial. Then he is always ready to say, that, without this exercise, no one can be a good botanist. He must make his collection between the middle of April and the middle of October. No one should attempt to teach a class at any other season. But he may prepare himself in one season, under a teacher, for collecting the next, in any six weeks within the time prescribed.

After the student has become acquainted with a considerable number of plants, he may begin to read from the 233d page of this book. At this stage of his course, the elementary works of Mrs. Lincoln (Phelps,) Sumner, Nuttall, Lock, Comstock, &c., will be read profitably. Bigelow's Smith will then be very instructive. And at last, Torrey's Lindley may be studied to advantage, by those who are desirous to be instructed in vegetable Physiology.

In regard to the preparation of this treatise, it is proper for me to make several acknowledgments. Though the labor is my own, the plan of the work was suggested by Prof. EATON. He supervised it also at every step of its progress; and directed me in the selection and use of authors. Most of the

proof-sheets were revised by him, and some important additions and corrections were thus introduced. I received considerable aid and advice from several other experienced botanists—particularly Adj. Prof. Hall.

The Chemical Proximate Elements were to have been included; but the work had extended beyond its proposed limit, without leaving any room for them. The small treatise, entitled *Chemical Instructor*, is recommended to those, who have time to devote to this very interesting branch of learning. At the Rensselaer Institute, Organic Chemistry is studied in connection with Animal and Vegetable Physiology; which course is proved, *by experience*, to be a very great improvement.

L. J.

ERRATA,

Made in no case, excepting where young students might be misled.

Page 23. near bottom. Lichens must be Lichenes, when the order is intended.

“ 28. Sedger—Sedges.

“ 20. Kyllinga—Kyllingia.

“ 30. Rotboellia—Rottbollia.

“ 41. Ampelomopsis—Ampelopsis.

“ 48 to 71. Running head mostly erroneous. Correct with the pen with good thick ink.

“ 65. SEROPHULARIA—SCROPHULARIA.

“ 71. PHASEOLIS—PHASEOLUS.

“ 74. HYMENAPAPFUS is repeated.

“ 77. POLNMNIA—POLYMNIA.

“ 83. OSTRAYA—OSTRYA.

“ 109. Eratable Museroon—Eatable Mushroom. All errors in English names, may be corrected by the English Index.

TABLE OF NATURAL ORDERS

FOR REFERENCE

FROM THE ARTIFICIAL.

NATURAL ORDERS OF JUSSIEU.

ACOTYLEDONOUS PLANTS.

<i>Names.</i>	<i>Examples.</i>	<i>Properties.</i>
1. Fungi.	Mushroom, mould.	Tonic if dry, narcotic if juicy.
2. Algae.	Lichen, conferva.	Tonic, some used in <i>dying</i> .
3. Hepaticae.	Brook liverwort.	Tonic, refrigerant.
4. Musci.	Proper mosses.	Tonic, rarely cathartic.
5. Filices. .	Brakes, polypod.	Secernant stimulants.
6. Naiades.	Duck meat.	Astringent.

MONOCOTYLEDONOUS PLANTS.

CLASS I. *Stamens below the pistil.*

7. Aroidea.	Wild Turnip.	Warming stomachic and anti-
8. Typhae.	Cat tail.	Weak tonic. [<i>spasmodic</i> .]
9. Cyperoideae.	Sedge grass.	Tonic, coarse cattle fodder.
10. Gramineae.	Timothy grass.	Tonic, farinaceous, cattle fodder.

CLASS II. *Stamens surrounding the pistil.*

11. Palmae.	Date, cocoanut.	Weak tonic, farinaceous.
12. Asparagi.	Solomon seal.	Secernant stimulant, mild tonic.
13. Junci.	Sweet flag.	Secernant stimulant, antiscorbutic
14. Liliaceae.	Tulip, addertongue.	Emollient, weak secernant stim-
15. Bromeliae.	Pine-apple.	Refrigerant. [<i>ulant</i> .]
16. Asphodeli.	Onion, hyacinth.	Expectorant, tonic, cathartic.
17. Narcissi.	Daffodil.	Weak tonic, emollient.
18. Irides.	Iris, blue-eyed-grass.	Antiscorbutic, tonic.

CLASS III. *Stamens on the pistil.*

19. Musae.	Bread-tree.	Tonic.
20. Cannae.	Ginger.	Warming stomachic.
21. Orchideae.	Lady's slipper.	Emollient, stomachic, farinacc-
22. Hydrocharides.	Tape-grass.	Weak tonic. [<i>ous</i> .]

DICOTYLEDONOUS PLANTS.

Section first. Flowers apetalous.

CLASS I. *Stamens on the germ.*

23. Aristolochiae.	Wild ginger.	Tonic, warming stomachic.
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Subdivisions by Lindley, &c. 7. Juncagineae, Fluviales, Pistiaceae.
 12. Smilacaceae, Dioscoreae. 13. Alismaceae, Commelineae, Xyrideae,
 Melanthaceae. 17. Hypoxideae, Amaryllideae, Pontedereae. 18. Hae-
 modoraceae. 20. Marantaceae. 22. Burmanneae.

Names.	Examples.	Properties.
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CLASS II. *Stamens surrounding the germ.*

24. Eleagni.	Pepperage tree.	<i>Weak tonic.</i>
25. Thymeleae.	Leather-wood.	<i>Mild emetic, antiscorbutic.</i>
26. Proteae.	Silver tree.	<i>Weak tonic.</i>
27. Lauri.	Sassafras.	<i>Secernant stimulant, stomachic.</i>
28. Polygoneae.	Dock, rhubarb.	<i>Mild cathartic, antiscorbutic.</i>
29. Atriplices.	Beet, Pokeweed.	<i>Aperient, cathartic.</i>

CLASS III. *Stamens below the germ.*

30. Amaranthi.	Cock's comb.	<i>Weak tonic, secernant stimulant.</i>
31. Plantagineae.	Plantain.	<i>Emollient.</i>
32. Nyctagines.	Four-o'clock.	<i>Cathartic, emetic.</i>
33. Plumbagines.	Sea-lavender.	<i>Cathartic, tonic.</i>

Section second. Flowers monopetalous.

CLASS IV. *Corols below the germ.*

34. Jasmineae.	Ash, lilac.	<i>Tonic, secernant stimulant.</i>
35. Lysimachiae.	Loose-strife.	<i>Weak tonic, secernant stimulant.</i>
36. Pediculares.	Heal-all.	<i>Tonic, cathartic.</i>
37. Scrophularia.	Fox-glove.	<i>Narcotic, absorbent, deobstruent.</i>
38. Solaneae.	Red pepper, henbane.	<i>Narcotic, cathartic, stomachic.</i>
39. Acanthi.	Malabar nut.	<i>Emollient, weak tonic.</i>
40. Bignoniae.	Snake-head.	<i>Cathartic, narcotic.</i>
41. Vitices.	Vervain.	<i>Secernant, stimulant, deobstruent.</i>
42. Labiateae.	Sage, catnip.	<i>Secernant stimulant.</i> [cont.]
43. Boragineae.	Borage.	<i>Astringent, emollient.</i>
44. Convolvuli.	Jalap, dodder.	<i>Cathartic.</i>
45. Polemoniae.	Lichnida.	<i>Feeble tonic.</i>
46. Gentianae.	Carolina pink.	<i>Cathartic, tonic.</i>
47. Apocynae.	Milk-weed.	<i>Cathartic, narcotic, deobstruent.</i>
48. Sapotae.	Sour sop.	<i>Cathartic, antispasmodic.</i>

CLASS V. *Corols surrounding the germ.*

49. Guaiacanae.	Lignum vitae.	<i>Tonic, warming stomachic.</i>
50. } Rhododendra.	Laurel.	<i>Tonic, narcotic.</i>
51. } Ericae.	Wintergreen.	<i>Tonic, astringent, refrigerant.</i>
52. Campanulaceae	Lobelia.	<i>Cathartic, emetic, deobstruent.</i>

CLASS VI. *Corols on the germ—anthers united.*

53. Cichoraceae.	Lettuce, endive.	<i>Aperient, mild anodyne.</i>
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Subdivisions by Lindley, &c.

25. Santalaceae.	28. Begoniaceae.
29. Chenopodeae, Phytolacceae.	30. Illecebreae, Scelerantheae.
34. Oleaceae.	35. Primulaceae, Lentibulariae.
36. Orobanchaeae, Rhinanthaceae.	40. Pedalineae, Myoporineae.
41. Verbenaceae.	43. Heliotropieae, Hydrophyllae.
44. Hydroleaceae.	46. Spigeliaceae.
47. Asclepiadeae.	49. Ebenaceae.
51. Vaccineae, Pyrolaceae.	52. Lobeliaceae, Stylideae.
53. Hieraceae, Taraxaceae, Lactuceae.	

<i>Names.</i>	<i>Examples.</i>	<i>Properties.</i>
54. Cinarocephalae	Thistle, burdock.	<i>Tonic</i> , if nauseous <i>cathartic</i> .
55. Corymbiferae.	Boneset, fleabane.	<i>Tonic</i> , <i>seccernant stimulant</i> .

CLASS VII. *Corols on the germ—anthers separate.*

56. Dipsaceae.	Button bush, teasel.	<i>Weak tonic</i> .
57. Rubiaceae.	Bedstraw, venus pride.	<i>Weak tonic</i> , <i>aperient</i> .
58. Caprifolia.	Elder, dogwood.	<i>Tonic</i> , <i>cathartic</i> if nauseous.

*Section third. Flowers polypetalous*CLASS VIII. *Stamens on the germ.*

59. Araliae.	Ginseng, spikenard.	<i>Tonic</i> , <i>expectorant</i> .
60. Umbelliferae.	Cicuta, fennel.	<i>Stomachic</i> , <i>narcotic</i> if nauseous.

CLASS IX. *Stamens below the germ.*

61. Ranunculaceae	Crowfoot gold thread.	<i>Narcotic</i> , <i>astringent</i> .
62. Papaveraceae.	Bloodroot, poppy.	<i>Narcotic</i> , <i>anodyne</i> .
63. Cruciferae.	Radish, cabbage.	<i>Diurctic</i> , <i>antiscorbutic</i> , <i>warming</i> .
64. Capparides.	Cleome, mignonette.	<i>Aperient</i> , <i>narcotic</i> if nauseous.
65. Sapindi.	Soap-berry.	<i>Emollient</i> .
66. Acera.	Maple tree.	<i>Aperient</i> , <i>diurctic</i> .
67. Malpighiae.	Barbadoes cherry.	<i>Aperient</i> .
68. Hyperica.	John's wort, sundew.	<i>Tonic</i> , <i>vulnecary</i> .
69. Guttiferae.	Misseltoe-rose.	<i>Expectorant</i> , <i>seccernant stimu-</i>
70. Aurantia.	Orange, lemon.	<i>Tonic</i> , <i>refrigerant</i> . [lant.
71. Meliae.	Tea.	<i>Astringent</i> , <i>anodyne</i> .
72. Vites.	Grape.	<i>Astringent</i> , <i>refrigerant</i> .
73. Gerania.	Wood-sorrel, gerani-	<i>Tonic</i> , <i>refrigerant</i> , <i>narcotic</i> if
74. Malvaceae.	Hollyhock. [um.	<i>Emollient</i> , <i>aperient</i> . [nauseous.
75. Magnoliae.	White wood.	<i>Tonic</i> , <i>aperient</i> .
76. Annonae.	Custard apple.	<i>Tonic</i> , <i>aperient</i> .
77. Menispermata.	Moonseed.	<i>Feeble narcotic</i> .
78. Berberides.	Witch hazel.	<i>Astringent</i> , <i>refrigerant</i> .
79. Tiliaceae.	Basswood.	<i>Emollient</i> , <i>aperient</i> .
80. Cisti.	Rock-rose, violet.	<i>Tonic</i> .
81. Rutaceae.	Rue.	<i>Caustic</i> , <i>narcotic</i> .
82. Caryophylleae.	Pink, flax.	<i>Emollient</i> , <i>aperient</i> .

CLASS X. *Stamens surrounding the germ.*

83. Sempervivae.	Houseleek, live-forever.	<i>Emollient</i> , <i>vulnerary</i> .
84. Saxifragae.	Saxifrage, currant leaf.	<i>Tonic</i> .
85. Cacti.	Prickly pear, currant.	<i>Refrigerant</i> , <i>emollient</i> , <i>tonic</i> .
86. Portulaccae.	Purslane.	<i>Emollient</i> , <i>vulnerary</i> .

Subdivisions by Lindley, &c. 54. Cardiacae. 55. Inuleae, Astereae-Eupatoriaceae, Heliantheae, Anthemideae, Ambrosiaceae. 56. Valerianeae. 57. Stellatae, Cinchoneae. 58. Lorantheae. 61. Hydropeltiaceae. 62. Nymphaeae, Nelumboneae, Podophyllaceae, Sarraceniae. 54. Resedaceae. 66. Hippocastaneae. 68. Droseraceae. 70. Ternstromeriaceae. 71. Cedreleae, Styraceae. 73. Oxalideae, Tropeoleae, Balsameae. 75. Wintereae. 78. Hamamelideae. 80. Violaceae. 81. Zygophylleae. 83. Galacineae. 85. Grossulariae. 86. Elatineae, Crassulaceae.

<i>Names.</i>	<i>Examples.</i>	<i>Properties.</i>
87. Ficoideæ.	Ice plant.	<i>Emollient, refrigerant.</i>
88. Onagrae.	Scabish.	<i>Tonic, aperient.</i>
89. Myrti.	Mock orange.	<i>Tonic.</i>
90. Melastomae.	Deer grass.	<i>Feeble tonic.</i>
91. Salicariae.	Willow herb.	<i>Deobstruent, cathartic.</i>
92. Rosaceae.	Apple, rose, peach.	<i>Refrigerant, tonic, astringent.</i>
93. Leguminosae.	Cassia, pea, clover.	<i>Aperient, diuretic, emollient.</i>
94. Terebintaceae.	Sumach, butternut.	<i>Cathartic, emetic, narcotic.</i>
95. Rhamni.	Winter berry, jersey tea.	<i>Cathartic, tonic.</i>

Section fourth. Diclinious or anomalous.

CLASS XI. *Flowers mostly apetalous.*

96. Euphorbeae.	Castor bean.	<i>Cathartic, mild emetic.</i>
97. Cucurbitaceae.	Cucumber, melon.	<i>Cathartic, refrigerant.</i>
98. Urticeae.	Hop, hemp, fig.	<i>Tonic, anodyne.</i>
99. Amentaceae.	Oak, willow, elm.	<i>Astringent, tonic, emollient.</i>
100. Coniferaeae.	Pine tree, cedar.	<i>Expectorant, secernant stimulant.</i>

Subdivisions by Lindley, &c. 88. Haloragaceae, Circeaceae, Callitrichineae, Ceratophylleae, Hydrocharideae, Loaseae, Turneraceae. 89. Philadelphaeae. 91. Rhizophoreae. 92. Calycanthaeae, Sanguisorbeae, Pomaceae, Amygdaleae, Chrysobalaneeae. 93. Polygaleae, Fumariaceae, 94. Amyrideae, Juglandaeae, Anacardiaceae, Xanthoxyleae. 95. Celastrineae, Hippocrateaceae, Staphyleaceae, Ilicineae. 96. Empetreae. 97. Passifloreae, Papayaceae. 98. Artocarpeae, Datisceae, Saurureae, Piperaceae. 99. Ulmaceae, Cupuliferae, Betulincae, Salicineae, Plataniae, Myriceae. 100. Cycadeae.

DIRECTIONS.

1. *For explanation of words*, use the common English Dictionary; and the Glossary at p. 254—or the Index at the end of it, which refers to the pages in the fore part of the book, where the words are explained.

2. *For abbreviations*, turn to p. 101.

3. *For characters and letters*, turn to p. 232.

4. *For natural affinities and properties*, turn to the table which ends on this page.

5. *For English names of plants*, look at the Index at the end of this book; find the abbreviated generic name, and turn to it by its alphabetical order, where the species are described.

6. *The abbreviations* are printed on cards to be pasted inside of the cover; so that, by turning up, they may be perpetually in view.

DIRECTIONS FOR TEACHERS.

NAMING, LABELLING, AND PRESERVING PLANTS.

EXPERIENCE has demonstrated that the student in botany will make the best possible progress, by merely studying the names of plants, until he can call the names of four or five hundred species at sight. He will then be prepared to study their systematic and physiological characters, their affinities and properties.*

It is always the first business of successful instructors, to lead the pupil, by the shortest possible course, to an acquaintance with plants in the *flowering* season, by name. Consequently, students should commence the study between the middle of April and the middle of September, when specimens of plants in the flowering state may be obtained in abundance. Drawings, or printed figures, are of little use in this part of the study; for the student must see *real growing specimens* of every plant, and of every *organ* to which his attention is called.

The memory must not be burdened with many technical terms—a few are sufficient for preparing the student for entering upon the study of generic names. Afterwards, good progress may be made by the help of a glossary; both in generic and specific names.

No progress can be made in the study of plants, by the aid of an elementary treatise alone. A book is required, which contains all the generic and specific names of all known plants, within the district of country where pupils are taught. Their names must be arranged in groups, just sufficient to enable them to refer a plant under examination to its proper group, or class, by a few of its most striking external characters. Take, for example, the flower of the *pear*, (whose name we are not supposed to know,) and proceed as follows:

1. By an attention to organs, hereafter to be explained, we find it in the 11th class.

2. By other organs, we refer it to the 5th order.

3. Next it is found to be genus *PYRUS*.

4. At last we examine the species of this genus, and find it contains the species, *apple*, *pear*, *quince*, and *crab*. On a close examination, we find it to be species *pear*.

In determining the generic name of a plant, first examine the stamens. Unless the number of stamens considerably exceeds ten, count the number of divisions of the calyx, or corol. This will aid in determining the number of stamens in cases of accidental deficiencies, &c. For the number of stamens will agree with those divisions, or with a mul

* Doct. Tully, (who honored the author with personal remarks on a portion of this work in MS.,) said, that he should be in favor of teaching pupils, (if public opinion would favor it,) the names of four or five hundred species of plants by the *mere dictum* of the teacher, before they studied the elementary principles; even those of classification.

multiple or divisor of them. If these are in two surrounding series, each series must be reckoned separately. For example; the mustard has four petals, with an inner series of four stamens—also an outer and shorter series of two stamens, (a divisor of the petals.)

In some cases the inner series is governed by the germ. For example; the buck-wheat, (*Polygonum fagopyrum*,) has five divisions to the calyx, with an outer series of five stamens—also an inner series of three stamens, corresponding with the three-sided germ. An accidental variation of the germ will cause a variation in the number of stamens. For example; the Prince's feather (*Polygonum orientale*) has a two-sided germ, or rather lenticular: this species has but two stamens in the inner series, because the germ has but two sides, making its whole number but seven.

Having determined the number of stamens, if ten or under, or that the number exceeds ten, examine their position, relative length, and connexion, according to the definitions of the Linnean Artificial classes. When the plant is carefully referred to its true class, examine the descriptions of the orders under each class, until its true order is ascertained. If the order is large, and divided into sections, let its true section be found by an examination of definitions of the sections.

Having brought the plant to the smallest subdivision to which it can be referred, proceed to compare the parts of fructification with the descriptions of the genera of that sub-division. If the descriptions are well drawn, the plant will be excluded from all the genera but one. Take the name of the remaining (unexcluded) genus, and proceed with it to the species. Here find its name in the usual manner of finding words arranged alphabetically in any common dictionary, if Eaton's Manuel is used; or find it by the number of the genus, in Bigelow, Pursh, Darlington, Elliot, Barton, Torrey, and many other works. If Beck's Natural System is used, look for the number of the genus under each natural order; for he begins a new series of numbers under each order.* Then compare the plant with the specific descriptions under the genus, until the species is found.

This exercise, called analyzing, should frequently occupy an hour. But the chief business of a student should be to collect plants as fast as they open their flowers—and to prepare them for the herbarium. The students of a class should go out, in small parties, in different directions, and each should collect more than he needs, in order to exchange with other students. It is impossible for any student to analyze one tenth part of his plants, if he is an industrious collector. Therefore, the teacher must appoint a labeling exercise when a sufficient number of plants is collected. Students must assort the plants collected, and lay them on a table, in distinct parcels. The teacher may look over the parcels, and put a label of the generic and specific name in each parcel before or after the class meets; or he must announce the names personally. Students should always turn to the name in the book, in order to be accurate in the spelling. Labels should always be looped to the plants to prevent mistakes, and the label should be frequently read at the same time that the plant is closely inspected. In this way, he will be enabled to recall the name at sight of the plant; and to recall the form, or habit, of the plant by its name.

* Prof. Eaton recommends Beck's Botany, as a cheap substitute for the expensive work of De Candolle, so far as it applies to the Northern States. Also for its usefulness to those who wish to study Natural orders, upon De Candolle's method. But he agrees with Dr. Tully, and with all other successful teachers, in the indispensable use of the artificial system for beginners.

There can be no such thing in the world as a lazy botanist; and an unhealthy botanist, or a botanist of feeble health, is almost a paradoxical expression. The bodily exercise in collecting plants, and the mental exercise in studying them, seems, by experience, to secure health and cheerfulness, until we arrive at that stage in our existence, when "life must downward tend." Should Omnipotence offer me one wish, it would be—"let every individual of our race, study his works; particularly the vegetable kingdom." Society would then be almost perfect.

After plants are labelled, let them be preserved in plenty of papers, excluded from air by the close contact of the sheets enclosing them. Let their moisture be absorbed by the paper, under a heavy pressure of weight (50 or 60 pounds) or by a screw press. Plants must be transferred to dry papers at least once in twenty-four hours; and they must be taken out, their labels read, and in damp rainy weather, their absorbing-papers dried by the heat of a fire.

At the close of the year, when the plants are well dried by absorption, and consequently tough and flexible, put them into a neat, well-bound book, arranged systematically.

According to what system should plants be arranged in an Herbarium? This question has often been asked. It appears to me, that the answer is perfectly apparent. Those who are designed for the profession of Medicine, should arrange them according to the Natural Method, by which they are led at once to the medicinal properties of plants. Those who intend to give but little attention to botany, or who intend to teach, should arrange their Herbarium upon the Linnean Artificial Method. Those who study plants extensively, with reference to the arrangement of them by their nomenclature, affinities, natural arrangement, &c., should prepare the Herbarium for the two methods—and should add an alphabetical index.

To know the names of individual species, is the first business of the student in botany. For who can reason, or even speculate, upon subjects of which he has no knowledge. We treat our predecessors with contempt, when we neglect to study their works. And moderns, as well as ancients, inquire of Nature (who grants her favors sparingly) for true wisdom in the study of her works. This favor she seems to deny, unless she be sought unto diligently.

NOTES FOR AN INTRODUCTORY LECTURE.

1. I held in my hand a plant, of whose name and qualities we are supposed to be ignorant. If its name can be ascertained, we can search for its qualities and uses, in all treatises on this subject, from the days of Esculapius, with perfect success.

2. To ascertain its name, we must resort to the Linnean artificial system—to ascertain its qualities, we must refer it to the Natural System of Jussieu, improved by Brown, De Lamarck, De Candolle, Lindley, and others. In the text-book which we adopt, references are made, by which, when we find out the name, we are led directly to the required Natural Order—consequently to its general qualities.

3. The lecturer now analyzes a plant selected for this lecture, and traces it through its Class, Order, and Genus. There he refers it again to its Genus by alphabetical series—there he refers it to its specific name; then to its Natural Order, and gives its general qualities. He should say, that it is the duty of the botanist to give its *general* properties. The

lecturer on *Materia Medica* must begin here, and give the measure of dose, and other practical directions for its use in *Medicine*. And that the *Horticulturist* and *Agriculturist*, must begin here to apply the rules of their respective professions.

4. The lecturer should say to his auditors, that all the nations of the earth have agreed, by a tacit assent that Latin shall be the language for the exchange of thoughts on the *Natural Sciences*. Therefore Latin names of plants are the legitimate names. And that when names of men or places are applied to plants, they shall be Latinized and applied according to the established rules of grammar. Thus we say *Bidens Beckii*, (beggar-tick of Beck) or *Potentilla Canadensis*, (Canadian five-finger) In most cases, the specific name expresses the real or supposed qualities, habits, or configurations of plants. They are adjectives following the nouns, with which they agree in number, case, and gender; as *Helianthus annuus* annual sunflower.

5. English names of plants are too variable to be received as guides in the use of plants. For example, the *Eupatorium purpureum* is called Joepyee in Berkshire county, Massachusetts—Boneset near New York—Thoroughwort in Connecticut, and Trumpet-weed in some of the southern States. Therefore, we should always label plants with the scientific name; reserving to ourselves the right of calling them by the common local names of our immediate vicinage.

6. The lecturer should not neglect to make all his auditors sensible of the fact; that the subject of botany, after six days of study, requires no more of the time required for other studies. The bodily exercise in collecting plants, after 4 o'clock P. M., each fair day, is all that is required. But this must be unremitted through the months of May, June, July, August, and September. Sleep is made sweet and health is sustained, beyond measure, by this exercise.

LESSONS FOR STUDENTS.

ELEMENTARY ORGANS.

Technical terms, to be learned before studying the names of genera.

Each student is furnished with a flower, in which all the usual organs are present. The instructor then illustrates these seven elementary organs, by pointing to each.

1. *Calyx*,*—The leaf cup of the flower, generally green.
2. *Corol*.—The blossom, or delicate part of the flower.
3. *Stamens*.—The organs immediately surrounding the central one.
4. *Pistil*.—The central organ of the flower.
5. *Pericarp*.—The covering of the seed.
6. *Seed*.—The part which contains the rudiment of a new plant.
7. *Receptacle*.—The base which sustains the other six parts.

Sub-division of the calyx.

Every calyx is either monophyllous (consisting of one leaf) or polyphyllous, consisting of more than one leaf.

1. *Perianth*.—That calyx which adjoins the other parts of the flower.

* These terms, and all others employed in this book, will be fully defined in the Glossary.

2. *Involucre*.—A leaf-like calyx which comes out some distance below the flower, and never embraces it closely.
3. *Spatha*.—A membrane, which at first encloses the flower, and after it expands, is left at a distance below it.
4. *Glume*.—A chaffy calyx which is composed of valves or scales.
5. *Ament*.—An assemblage of lateral scales, arranged on a long receptacle : each scale is a calyx.
6. *Calyptre*.—The cap of pistilate mosses, resembling an extinguisher set on a candle.
7. *Volva*.—The ring or wrapper of a fungus.

Sub-divisions of the corol of one petal.

1. *Bell-form*.—Hollowed out within the base, and generally diverging upwards.
2. *Funnel-form*.—With a tubular base, and in the form of a tunnel.
3. *Sulver-form*.—Having a flat border, proceeding from the top of a tube.
4. *Wheel-form*.—Having a spreading border, without a tube.
5. *Labiate*.—A labiate corol is divided into two parts, somewhat resembling the lips of a horse or other animal.

Sub-division of the corol of more than one petal.

1. *Cruceiform*.—Consisting of four equal petals, spreading out in the form of a cross.
2. *Caryophylleous*.—Having five petals, each with long claws, enclosed in a tubular calyx.
3. *Liliaceous*.—A corol with six petals, of a bell-form appearance.
4. *Rosaceous*.—Spreading petals, without claws, or with short ones.
5. *Papilionaceous*.—A flower with a banner, two wings, and a keel. If a corol agrees with none of the above descriptions, it is called anomalous.

Sub-divisions of the Stamen.

1. *Anther*.—A knob of the stamen which contains the pollen.
2. *Pollen*.—The dusty, mealy, or glutinous substances in the knob.
3. *Filament*.—That which elevates the anther, or knob.

Sub-divisions of the Pistil.

1. *Stigma*.—The end of the pistil.
2. *Germ*.—That part of the pistil, which, in maturity, becomes the pericarp and the seed; as the cherry.
3. *Style*.—That part of the pistil which connects the stigma and the germ.

Sub-division of the Pericarp.

1. *Silique*.—The pod which has a longitudinal partition.
2. *Legume*.—The pod, without the longitudinal partition.
3. *Capsule*.—That pericarp which opens by valves, or pores, and becomes dry when ripe.
4. *Drupe*.—That pericarp which is thick and fleshy, enclosing a nut or stone.
5. *Pome*.—Pulpy fruit, which contains capsules.
6. *Berry*.—Pericarp, enclosing seed without capsules within it.

7. *Strobile*.—An ament, with woody scales.

Inflorescence.

The manner in which Flowers are situated on plants.

1. *Whorl*.—Flowers around the stem in rings.
2. *Raceme*.—Florets on undivided pedicels.
3. *Panicle*.—Florets on divided pedicels. A panicle contracted, is called a thyse.
4. *Spike*.—Florets sessile on the elongated general receptacle.
5. *Umbel*.—Flower-stems, diverging from one place.
6. *Cyme*.—General flower-stems spring from one centre, but subordinate flower-stems irregularly sub-divided.
7. *Corymb*.—Flower-stems take their rise from different heights along the main stem.
8. *Fascicle*.—Flower stems irregular in their origin and sub-divisions.
9. *Head*.—Heaped together in a globular form, without peduncles.

CLASSIFICATION.

According to the views of Linneus, (this father of this science of nature) plants should first be arranged into Classes, Orders, and Genera. And though genera must be divided into species, this distribution is a subordinate operation of minor importance. Therefore, he confined the characteristics to the fructification, for determining the Classes, Orders, and Genera, of every plant—leaving the species of a genus to be decided by taking various parts of plants into consideration.

It should always be the business of students in botany to study the fructification of plants, before considering any other parts of them. Therefore Classes, Orders, and Genera, should always occupy the student a considerable time, before he attempts a farther investigation.

The preceding terms, added to the Latin and Greek numerals, as far as twenty, will be sufficient for entering upon the study of the fructification of plants, and for determining the Class, Order, and Genus of any plant under examination.

LATIN AND GREEK NUMERALS TO BE COMMITTED TO MEMORY.

<i>Latin.</i>	<i>Greek,</i>
Unus,	1. Monos,
Bis,	2. Dis,
Tres,	3. Treis,
Quatuor,	4. Tettares,
Quinque,	5. Pente,
Sex,	6. E χ , (pronounced hex,)
Septem,	7. Epta, (pronounced hepta,)
Octo,	8. Okto,
Novem,	9. Ennea,
Decem,	10. Deka,
Undecem,	11. Endeka,
Duodecem,	12. Dodeka,
Tredecem,	13. Dekatreis,
Quatuordecim,	14. Dekatettares,
Quindecim,	15. Dekapenta,
Sextdecim,	16. Dekae χ ,

Septemdecim,
Octodecim,
Novemdecim,
Viginti,
Multus,

17. Dekaepta,
18. Dekaocto,
19. Dekaennea,
20. Eikosi.
21. Many Polus.

FORMS OF LEAVES, PETALS, CALYX-LEAVES, GERMS, &c.

Linneus assumed standard forms, drawn from common natural bodies; and from artificial implements and instruments in common use among the ancients, before the end of the fourth century. The various parts of plants are referred to those forms, from which they differ least; and two or more may be united by a hyphen, when such union is necessary.

NATURAL FORMS.

English.	Latin.
<i>Animals in general,</i>	
bristle,	<i>Seta,</i>
hair,	<i>capillus,</i>
lip,	<i>labium,</i>
teeth,	<i>dens.</i>
<i>Birds.</i>	
beak, bill,	<i>rostrum,</i>
claw,	<i>unguis,</i>
down,	<i>lanugo,</i>
egg,	<i>ovum,</i>
feather,	<i>pluma, penna,</i>
feet,	<i>pedis (of pes)</i>
spur,	<i>calcar,</i>
wing,	<i>pinna, ala,</i>
<i>Men.</i>	
arm, armpit,	<i>axilla,</i>
beard,	<i>barba,</i>
ear,	<i>auris,</i>
eye,	<i>oculus,</i>
hand,	<i>palma,</i>
head,	<i>caput,</i>
heart,	<i>cordis, (of cor)</i>
kidney,	<i>renis,</i>
knee,	<i>genu,</i>
navel,	<i>umbilicus,</i>

ARTIFICIAL FORMS.

English.	Latin.
<i>Instruments of Art.</i>	
awl,	<i>subula,</i>
cross,	<i>crusis (of cruz,)</i>
crown,	<i>corolla,</i>
cup,	<i>cyathus, calyx,</i>
fork,	<i>furca,</i>
keel,	<i>carina,</i>
needle,	<i>acus, †</i>
salver,	<i>hypocratera,</i>
saw,	<i>serra,</i>
spike,	<i>spicum,</i>
spindle,	<i>fusus,</i>
tunnel,	<i>infundibulum,</i>
<i>Mathematical figures.</i>	
delta, (Gr. letter)	<i>sub-triangulus</i>
line.	<i>linearis,</i>
ovate,	<i>ovum,</i>
top,	<i>turbo,</i>
<i>Instruments of Sound.</i>	
bell	<i>campanum,</i>
lyre,	<i>lyra,</i>
viol.	
<i>Instruments of War.</i>	
arrow,	<i>Sagitta,</i>
club,	<i>clava,</i>
halbert,	<i>hasta,</i>
lance,	<i>lancea,</i>
shield,	<i>scutum,</i>
falcate,	<i>falcis (of falx,)</i>
sword,	<i>ensis.</i>

LEAVES are evergreen or deciduous.

FORMS OF SIMPLE LEAVES.

1. *Ovate*.—Resembling the longitudinal section of an egg, the base being broader than the extremity.

2. *Oval*.—Differing from ovate, in having both ends equal in breadth.
3. *Oblong*.—The length more than twice the breadth and the sides somewhat parallel.
4. *Obovate*.—Ovate with the narrowest end towards the stem.
5. *Cordate*.—Heart-shaped, the hind-lobes being rounded, as lilac.
6. *Obovate*.—Cordate, with the apex or narrowest end towards the stem.
7. *Kidney-form*.—Hollowed in at the base, with rounded lobes and rounded ends.
8. *Lanceolate*.—In the form of the ancient lance.
9. *Linear*.—Continuing of the same width through nearly the whole length.
10. *Acute-form*.—Linear at the base, and becoming more or less curve^d at the point.
11. *Acuminate*.—Any kind of leaf terminating more or less suddenly in a point turned towards one edge of the leaf.
12. *Arrow-form*.—Shaped like an arrow-head; differing from cordate in having the hind-lobes more or less acute.
13. *Halbert-form*.—Hastate. Shaped like an halbert.
14. *Guitar-form*.—Oblong, broadish near the base and contracted at the sides.
15. *Lobed*.—Deeply parted, and the divisions large, with rounded sides or ends.
16. *Palmar*.—Resembling a hand with the fingers spread, as a horse-chestnut.
17. *Pedate*.—Resembling a bird's foot.
18. *Sinuate*.—Having the margin hollowed with deep sinuses or bays.
19. *Pinnatifid*.—Divided transversely by deep incisions, not extending to the midrib.
20. *Lyrate*.—Pinnatifid, with the largest division at the apex.
21. *Runcinate*.—Pinnatifid, with the divisions pointing backwards.

EDGES OF LEAVES.

22. *Serrate*.—Having sharp notches resembling saw-teeth along the margin, and pointing towards the apex.
23. *Toothed*.—Having projections from the margin of its own substance, which are neither serratures, nor crenatures.
24. *Crenate*.—Having uniform notches on the margin of the leaf, which incline towards the apex, or the base, or neither.

ENDS OF LEAVES.

25. *Emarginate*.—Notched at the termination of the Midrib.
26. *Retuse*.—Emarginate with a shallow sinus.
27. *Obtuse*.—Having the apex of the leaf more or less rounded.
28. *Acute*.—Terminating in an angle; that is, not rounded.

SURFACES OF LEAVES.

1. *Hairy*.—Having distinct strait hairs.
2. *Downy*.—Covered with fine cotton-like down.
3. *Silky*.—Covered with soft close-pressed hairs.
4. *Bristly*.—Set with stiff hairs.
5. *Ciliate*.—Edged with parallel hairs or bristles, resembling eyelashes.

6. *Nerved*.—Furnished with midrib-like fibres running from the base to the apex.

7. *Veined*.—Having tendinous fibres variously branched.

POSITIONS OF LEAVES.

1. *Decurrent*.—When the two edges of the leaf extend along the stem below the place of insertion.

2. *Clasping*.—Sessile, with the base more or less heart-form, so as entirely or in part to surround the stem.

3. *Sheathing*.—With the leaf prolonged down the stem, so as to cover it in the manner of the grasses.

4. *Perfoilate*.—Having the stem passing through the leaf.

5. *Connate*.—Leaves opposite with their bases united.

6. *Peltate*.—With the foot stalk attached to the lower side of the leaf, so as to resemble a shield.

7. *Opposite*.—Standing at the same height, with base against base.

8. *Whorled*.—Surrounding the stem in horizontal rings or rows.

9. *Imbricate*.—Lying over each other like shingles on a roof, so as to “break joints.”

10. *Fusciold*.—Growing in bunches from the same point, as leaves from white pine.

11. *Radical*.—Proceeding immediately from the root.

COMPOUND LEAVES.

1. *Ternate*.—Having three leaflets proceeding from the end of one petiole.

2. *Biternate*.—Twice ternate; when the petiole is ternate and each division bears three leaflets.

3. *Triternate*.—Three times ternate.

4. *Pinnate*.—With distinct leaflets arranged on the opposite sides of the same petiole.

5. *Bipinnate*.—Twice pinnate.

6. *Tripinnate*.—Thrice pinnate.

7. *Interruptedly pinnate*.—Having smaller leaflets dispersed among the larger.

APPENDAGES.

1. *Stipule*.—A leaflet or scale at or near the base of a petiole.

2. *Bract*.—A leaf among or near the flowers, different from the other leaves of the plant.

3. *Thorn*.—A sharp process from the woody part of a plant.

4. *Prickle*.—A sharp process from the bark, as those on raspberry bushes, &c.

5. *Sting*.—Hair-like processes, mostly from the leaves, as nettles.

6. *Gland*.—A roundish, generally minute, appendage to different parts of plants.

7. *Tendril*.—The filiform appendage by which climbing plants support themselves on other bodies.

LINNEAN ARTIFICIAL CLASSES.

A. *Ten Classes distinguished by number of stamens.*

1. *Monandria*.—One stamen in each flower. A small class obscure.
2. *DIANDRIA*.—Two stamens in each flower. Character distinct.
3. *TRIANDRIA*.—Three stamens in each flower. Mostly grasses, definite.
4. *TETRANDRIA*.—Four stamens in each flower. Very artificial, definite.
5. *PENTANDRIA*.—Five stamens in each flower. Contains several natural orders.
6. *HEXANDRIA*.—Six stamens in each flower. Calyx often wanting, definite.
7. *HEPTANDRIA*.—Seven stamens in each flower. A small class obscure.
8. *OCTANDRIA*.—Eight stamens in each flower. Mostly definite.
9. *ENNEANDRIA*.—Nine stamens in each flower. A small class, indefinite.
10. *Decandria*.—Ten stamens in each flower. Very definite.

B. *Two classes distinguished by number and position of Stamen.*

11. *ICOSANDRIA*.—More than ten stamens on the calyx. Stamens generally about 20, and some multiple of the divisions of corols.
12. *Polyandria*.—More than ten stamens not on the calyx. Stamens generally numerous and very definite.

C. *Two classes distinguished by number and proportional length of stamens.*

13. *DIDYNAMIA*.—Stamens four—two longer than the other two, corols labiate.
14. *TETRADINAMIA*.—Stamens six—four of them longer than the other two. Flowers all cruciform, and bearing siliques.

D. *Three classes distinguished by connexion of stamens.*

15. *MONADELPHIA*.—Stamens united by their filaments in one set. Sometimes the filaments have broad bases not united.
16. *DIADELPHIA*.—Stamens united by their filaments in two sets. Sometimes they are in one set; in such cases the flower is always papilionaceous.
17. *SYNGENESIA*.—Stamens united by their anthers, with five separate filaments. Flowers compound.

E. *Three classes distinguished by the position of stamens, relative to pistils.*

18. *GYNANDRIA*.—Stamens on the pistil distant from the bases of the corols. Glutinous pollen, and nectaries, generally present.
19. *MONOECIA*.—Stamens in flowers not containing pistils, but always on the same plant with those containing pistils. Pollen abundant.
20. *DIOECIA*.—Stamens in flowers not containing pistils, and always on separate plants from those containing pistils. Pollen abundant.

F. *One class distinguished by the want of stamens.*

21. *CRYPTOGAMIA*.—Stamens wanting, or eluding all research. This class is always referable to the natural method.

ORDERS OF THE ARTIFICIAL CLASSES.

- 1.
- 2.
3. Each of these 12 classes is distributed into orders by the number of the styles of the pistils—or by the number of stigmas, if styles are not present. The orders are named by combining a Greek numeral, expressing the number of styles, or stigmas, with gynia (a metaphorical name for pistil.) *Monogynia*, *Digynia*, *Trigynia*, *Tetragynia*, *Pentagynia*, *Hexagynia*, *Heptagynia*, *Octagynia*, *enneagynia*, *Decagynia*, *Polygynia*. Any number of these orders may occur in any one of these twelve classes.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
13. This class is divided into two orders. 1. *Gymnospermia*, seeds without pericarps.—2. *Angiospermia*, seeds in pericarps.
14. This class is divided into two orders. 1. *Pleurorhiza*, seeds with radicals on their sides. Cotyledons accumbent and compressed. Seeds often margined. 2. *Notorhiza*.—Seed with the radicle not on its side. It is generally on its back. Cotyledons mostly incumbent, not compressed nor margined.*
15. Each of these two classes is divided into orders by the numbers, position, and connexion of stamens, precisely as preceding classes are divided, and called by the same name.
16. 1. *Polygamia equalis* florets all perfect—2. *P. superflua* rays pistillate—3. *P. frustranea*, rays neutral—4. *P. necessaria*, disk staminate, and rays pistillate.—5. *P. segregata*, florets with separate calyxes.
17. 1. *Polygamia equalis* florets all perfect—2. *P. superflua* rays pistillate—3. *P. frustranea*, rays neutral—4. *P. necessaria*, disk staminate, and rays pistillate.—5. *P. segregata*, florets with separate calyxes.
18. Each of these three classes is distributed into orders by the number, position, and connexion of stamens, as in preceding classes; like the 15th and 16th.
19. These two are called by the same names—as *Monandria*, *Dian-dria*, *Triandria*, *Tetrandria*, *Pentandria*.
20. These two are called by the same names—as *Monandria*, *Dian-dria*, *Triandria*, *Tetrandria*, *Pentandria*.
21. This class is distributed into six orders, according to the natural affinities of plants arranged under it. 1. *Filices*, (ferns) 2. *Musci*, (mosses.) 3. *Hepaticae*, (liverworts.) 4. *Algæ*, (frogspittle,) and seaweeds. 5. *Lichens*, (lichens.) 6. *Fungi*, (mushrooms, puffballs, &c.)

* Linneus, (who is followed by Eaton, Bigelow, Darlington, and others, divides this class into *Siliculosa*, length and breadth of pods nearly equal—and *Siliquosa* pod much longer than broad.

GENERA OF PLANTS,

FOR

NORTH AMERICA.

CLASS I. MONANDRIA.—I. STAMEN

REMARKS. This class, which is not large, contains the ginger, cardamum, and turmeric. The *Salicornia* (samphire) is burned for barilla and pickled for the table. Most plants of this class are aquatics, and grow in marshes. The nature of the flowers of this class has long been a subject of dispute among botanists: some considering the colored inner segments to be the true petals, and variable in number; others, supposing them to be a part of the calyx, and constant in number.

ORDER I. MONOGYNIA.—1 *Stamen*. 1 *Style*.

Germ inferior, anther simple, style erect, free, flowers having spathes.

CANNA.—Anthers attached to the edge of the petal-like filaments. Styles thick, club-shaped. Stigma linear, obtuse. S.

THALIA.—Anther attached to its proper filaments. Style depressed. Stigma depressed, perforated, and gaping. S.

Apetalous.

SALICORNIA.—Cal. turbinate, entire, fleshy. Stamen inserted into the bottom of the cal. Style 2-fid. Utricle enclosed in the fleshy calyx. Seed vertically compressed.

HIPPOURIS.—Cal. entire, minute. Style in the hollow of the anther. Germen inferior, one-seeded, crowned by the rim of the calyx.

ORDER II.—DIGYNIA. 1 *Stamen*, 2 *Styles*.

CORISPERMUM.—Cal. 2-leaved. Cor. 0. Seed one, oval, convex plane. (Stamens often 5.) S.

CALLITRICHE.—Cal. 2-leaved. Pet. 0. Caps. 2-celled, 4-seeded.

BLITUM.—Cal. trifid. Cor. 0. Seed one, immersed in a berried calyx.

CLASS II. DIANDRIA.

2 STAMENS.

This class, which is not large, is so entirely artificial, that no other characters than those of the Linnean definition, can be assigned to it. The most useful of the class, are the pepper and the olive; the jasmine is used in perfumery; the sage and the rosemary in cooking; and the privet and syringa for garden hedges.

ORDER I. MONOGYNIA.

2 Stamens, 1 Style.

1. *Flowers complete, inferior, monopetalous, regular.*

OLE'IA.—Cor. 4-cleft. Segments subovate. Drupe one-seeded. S.

CHIONANTHUS.—Cor. 4-cleft. Segments very long. Drupe one-seeded, with a furrowed nut.

LIGSTRUM.—Cor. 4-cleft. Berry 4-seeded.

SYRINGA.—Cor. 4-cleft—capsule of two cells. E.

JASMINUM.—Cor. 5 or 8-cleft. Berry with two divisions. Seeds solitary, with an aril. E.

2. *Flowers complete, inferior, monopetalous, irregular.*

VERONICA.—Cor. 4-cleft : limb flattish ; the lowest segment the narrowest. Capsule 2-celled.

LEPTANDRA.—Calyx 5-parted, acuminate : corol tubular, 4-cleft, with one division smaller ; capsule ovate, 2-celled, opening at the top.

GRATIOLA.—Cor. 4-cleft, 2-lipped, resupinate. Stamens 4. 2-sterile. Caps. 2-celled.

LINDERNIA.—Calyx 5-parted, equal : corol reversed-tubular, ringent, the upper lip very short, the lower one unequally 3-cleft, 2-keeled at the base : anthers cohering by pairs, 2 stamens longer, forked, barren : capsule 2-celled, 2-valved, the partition parallel to the valves.

ELYTRARIA.—Cal. 4-5 parted, corol 5-cleft nearly equal. Caps. 2-valved, 2-celled. Seeds attached below to a dissepiment, contrary to the valves. S.

JUSTICIA.—Cal. 5-parted equal. Cor. 2-lipped or ringent : the lower lip divided. Anthers 2-celled. Seeds attached by little hooks.

PINGICULA.—Cor. ringent, spurred. Cal. 5-cleft. Caps. 1-celled.

UTRICULARIA.—Cor. ringent, spurred. Cal. 2 leaved. Caps. 1-celled.

MICRANTHEMUM.—Calyx 4-parted : corol 4-parted, and somewhat 2-lipped, with the upper one smaller than the rest : filament incurved, shorter than the corol. Capsule sub-globular, 1-celled, 2-valved ; with many striate seeds. S.

LYCOPUS.—Cor. 4-cleft, nearly equal, with one segment emarginate. Stamens distant—seeds naked.

MONARDA. Corol ringent : helmet linear, wrapping up the anthers : seeds naked.

ROSMARINUS.—Cor. ringent. Helmet arched, bifid. Stamens curved with a tooth. Seeds naked. E.

SALVIA.—Cor. ringent. Filaments stalked cross-wise. Seeds naked.

COLLINSONIA.—Cor. somewhat ringent : the lip very finely divided. Seeds naked.

HEMIANTHUS.—Calyx tubular—border 4-toothed ; cleft on the under side : corol with the upper lip obsolete, lower one 3-parted, with the middle segment linear or strap-like and truncate, long, closely incurved : stamens with two-cleft filaments, bearing the anthers on the lateral branches : capsules 1-celled, 2-valved, many-seeded : seeds ovate, shining.

CATALPA.—Cor. 5-cleft, irregular. Cal. 2-parted. Stam. 3, steril. Caps. 2-celled. Seeds at each end, with a membranous pappus.

ORNUS.—Cal. 4-parted, cor. of 4-petals. Fruit, a winged Samara of 2 cells.

3. *Flowers complete, superior.*

CIRCAEA.—Cal. 2-leaved. Cor. with two obcordate petals.

FEDIA.—Caps. 3-celled, crowned with the upright, (not involute,) limb of the calyx. Corol irregular.

ORDER II. DIGYNIA.

2 *Stamens*, 2 *Styles*.

ANTHOXANTHUM.—Glume membranous, 3-flowered. Lateral florets neuter with one glume, bearded; intermediate floret perfect, much shorter than the lateral ones, glume obtuse, beardless. Seed free.

CRYPTA.—Calyx 2-leaved, inferior: corol 2 or 3-petalled, closed: styles none: stigmas 2 or 3, very minute: capsule 2 or 3-celled, $\frac{1}{2}$ or 3 valved, cells 4 or 5-seeded: seeds subcylindric, striate, incurved. The corol appears like a capsule with an aperture at the top, when examined without a lens.

ERIANTHUS.—Calyx 2-valved, valves nearly equal, villose at the base: corol 2-valved, unequal, inner glume bearing a long awn near its summit. S.

ORDER III. TRIGYNIA.

2 *Stamens*, 3 *Styles*.

PIPER.—Cal. 0. Cor. 0. Berry-seeded. Spadix simple, slender, covered with little flower-bearing scales. E.

CLASS III. TRIANDRIA.

3 *Stamens*.

This class, contains most of the genera of three considerable and very natural orders—irideae, cyperaceae, and gramineae. The first are chiefly bulbous-rooted, sword-leaved plants, with brilliant but transient flowers; the second sedgy grass-like plants, more curious than useful; and the third, the proper grasses, an order which contributes more extensively and effectually to the support of man and domestic animals than any other, and contains no poisonous plant. The calyx and corol are rather to be considered as a form of Bract, as are also the inner scales, called Nectarium by Linneus.

ORDER I. MONOGYNIA.

3 *Stamens*, 1 *Style*.

1. *Flowers with calyx and corol distinct; or with a trifid corol only.*

VALERIANA.—Cal. very small, finally enlarged into a feathery papus. Corol monopetalous, 5-lobed, regular, gibbous at the base. Capsule 1-celled.

CALYMENTA.—Cal. 5-fid campanulate: cor. funnel-shaped, nut 1-seeded, surrounded by the enlarged calyx.

XYRIS.—Col. 3-valved, cartilaginous, clustered in a head—cor. 3-petalled, equal, caps. 1, 3-celled, 3-valved. Stigma 3-fid.

COMMELINA.—Cal. 3-leaved. Pet. 3. Filaments 3, or 4, steril, furnished with crossing glands. Caps. 2—3-celled. Seeds fixed to the valves.

HETERANTHERA. Calyx a 2 or 3-flowered spathe: corol dull-colored membranaceous, with a long slender tube, border 4 to 6-parted: anthers 3, 2 of them attached to the divisions of the corol, the other attached to the top of the style.

2. *Flowers with a 5-parted calyx, and no corol.*

POLYCNEMUM. Cal. 5-leaved. Seed 1 in a bladder.

3. *Flowers 6-parted, colored: the calyx and corol not distinct.*

CROCUS. Spathe usually 2-valved. Flower funnel-shaped, regular, the outer segments largest; tube very long, partly under ground. Stigma deeply trifid, with convolute segments. E.

IXIA. Spathe 2-valved: flower with a slender tube and regular limb: stigmas 3, narrow, recurved; caps. globose, ovate. S.

LEPTANTHUS. Flower monopetalous, with a very long and slender tube, a 6-parted limb, and nearly equal segments. Stigma single.

DILATIS. Flower superior, 6-petalled, regular. One filament shorter than the others, and with a larger anther: stigma simple: caps. 3-celled: seeds solitary.

IRIS. Flower 6-parted; every other division reflexed: stigmas shaped like petals.

PHYLACTIS. Involucre 1-leaved, sheathing: calyx marginal, minute: corol 3-cleft: seed 1: styles and stamens exsert. S.

TRIPTERELLA. Calyx (or corol) tubular, prismatic with winged margins: base ventricose: limb 6-cleft, internal teeth covering the stamens: corol none: stigmas 3, capitate: capsule 3-sided, 3-celled, many-seeded: stamens included within the tube of the calyx. S.

SYNA. Calyx deeply 3-parted (or 3 leaved) acute, permanent: petals 3, roundish: anthers oblong: stigma 3-cleft: capsule rendered acuminate by the permanent style: 1-celled, 3-valved.

STIPULICIDA. Calyx 5-parted, permanent: corol 5-petalled, entire, as long as the calyx: style short, stigmas 3: capsule 1-celled, 3-valved: seeds few, attached by filaments to the receptacle. S.

BOERHAAVIA. Calyx tubular, margin entire: corol 1-petalled, bell-form, plaited: seed 1, invested by the permanent calyx, naked or tubercled, 3-grooved, obconic: stamens various in number—1 to 10. S.

4. *Flowers glumaceous. Spathes entire. Sedger.*

SCHOENUS. Spikelets few-flowered, distichous; the lower scales nearly empty; the upper enclosing flowers: no bristles under the ovarium.

RHYNCHOSPORA. Spikelets few-flowered, slender; the lower nearly empty, the upper enclosing flowers. Eristles under the ovarium.

FIMBRISTYLIS. Spikelets imbricated in all directions; many-flowered, none of the scales empty: style jointed at the base, and deciduous. S.

SCIRPUS. Spikelets imbricated in all directions; many-flowered, none of the scales empty: bristles under the ovarium: style not jointed at the base, and deciduous.

FUIRENA. Scales of the calyx mucronate or awned, every where imbricate in a spike: corol 0; seed beset round with broad chaff-like scales, sometimes awned: these scales are called valves of corol by some.

ERIPHORUM. Glumes chaffy, imbricated in all directions: seed surrounded by very long dense wool.

CYPERUS. Spikelets in two ranks, imbricated; nearly all the scales enclosing flowers: no bristles under the ovarium: style deciduous; not bulbous.

KYLLINGA. Spikelets 1 flowered: glumes 4, imbricated in two rows, compressed; the two lower (which are smaller) and the upper one empty; the intermediate similar to the upper, and including a naked perfect flower: style bifid: no bristles under the ovarium: seed lenticular.

MARISCUS. Spikelets few-flowered; glumes imbricated in two rows, the lower empty: stamens sometimes two: style trifid; neither scales nor bristles below the ovarium: seed triangular.

DULICHUM. Spikes sub-racemed, proceeding from the axils of the leaves; spikelets linear-lanceolate, sub-compressed: scales or glumes somewhat 2-ranked, closely embracing: styles very long, 2-cleft: germ with small bristles, rough backwards.

Sheathes split. True grasses.

CENCHRUS. Involucre lacinate, echinate, 3 or 4-flowered: glumes 2-valved, 2-flowered; one flower barren: corol 2-valved, awnless: style 2-cleft.

SPARTINA. Glume 3-valved, 1-flowered, unequal, keeled, very acute; valves 2, beardless, bifid, emarginate and toothed, shorter than the glume: scales fringed: style very long: seed loose, covered with the valves; spikelets 1-sided, inserted in a double row; spike compound.

NARDUS. Glume 1-valved, 1-flowered: valve 1: stigma simple: seed covered by the valve. S.

ORYZOPSIS. Glume 2-valved, 1-flowered, membranous, a little longer than the hardened valve: valves 2, the lower villose at the end with a jointed beard, the upper entire: scales 2, linear, the length of the ovary: Panicle nearly simple and loose.

MYRANIA. Flowers in heads; involucre, 3-leaved: perianth none: corol glumaceous, 6-valved, toothed, imbricate: stigmas 3: seeds enveloped in a 6-parted glume. S.

ORDER II. DIGYNIA.

3 Stamens. 2 Styles.

1. *Inflorescence spiked or panicled*: spikelets either solitary, in pairs, or several together, one or more usually 2-flowered, one of the flowers being sterile or not perfect. Glumes usually of a thinner texture than the paleæ, which are more or less cartilaginous, the lower one half enfolding the upper, and either beardless or occasionally bearded; neither of them with a keel (Panicea, panic-like.)

PASPALUM. Glume 2-valved, 1 flowered, closely pressed to the two plano-convex paleæ: seed coated with the paleæ: flowers spiked, attached to one side of the toothed rachis.

MILIUM. Glume naked, beardless, 2-valved; the valves concave, larger than the paleæ, which are two, concave and equal. Seed coated with the indurated paleæ.

DIGITARIA. Inflorescence digitate or fascicled: spikelets 1-sided; flower-stalks 2-or many-flowered: glume 2-valved; the lower valve very minute; of the lower neuter floret the paleæ membranous; of the upper perfect floret the paleæ subcoriaceous hardened: seed slightly furrowed.

PANICUM. Glume 3-valved; valves unequal, the outer being very small: paleæ two, concave, equal, beardless: seed coated with the hardened paleæ: panicle scattered and loose.

PENNISETUM. **SETARIA.** Calyx 2-valved, 2-flowered; glumes unequal, herbaceous: inflorescence a spike, with a 2-or many-bristled involucre.

MONOCERA. Flowers in two rows on one side of the rachis: calyx 3-valved, many-flowered; valves awned below the tip. Perfect flowers have the corol 2-valved, unequal; the outer awned below the tip. Neutral flowers have corols with two awnless valves. S.

MANISURIS. Perfect flowers mixed with the staminate: calyx 1-flowered, valves 2, unequal; outer one coriaceous, roundish, emarginate on each side of the base: corol 2-valved, smaller, and included in the calyx. Staminate and neutral have the calyx regular. S.

LEPTURUS. Rachis articulated, filiform: articulations single-flowered: calyx growing to the rachis, 1 or 2-valved: valves simple, or 2-parted. S.

ROTBOELLIA. Rachis fragile, articulated, cylindric, often filiform: articulations 2-flowered or more: calyx flat, lance-ovate, 1 or 2-valved: corol smaller, 2-valved. S.

PLEURAPHIS. Central spikelet perfect: calyx 1-flowered with wedge-obovate, 2 cleft, 5-bristled glumes: lateral spikelets staminate; calyx 2-flowered, with one valve bristled near the base. S.

ORTHOPOGON. Has the character of *Panicum*, except that both the intermediate and third valves of the glume are bearded, and the panicle has alternate spikelets.

2. *Inflorescence panicle.* Spikelets solitary, 1-flowered. Glumes membranous, the lower paleæ coriaceous, bearded, enfolding the upper, which has not two keels. (Stipaceas, feather-grass like.)

STIPA. Glume 2-valved, 1-flowered, membranous, longer than the two cartilaginous paleæ, of which the lower is convolute, with a long beard at the apex; upper entire. Beard jointed at the base, deciduous. Scales oblong entire: seed furrowed: panicle almost simple, lax.

3. *Inflorescence panicle*, sometimes contracted into form of a spike. Spikelets solitary, 1-flowered. Glumes and paleæ of nearly similar texture, most usually with a keel. Lower paleæ either bearded or beardless, the upper never with two keels. (Agrostidea, red-top like.)

MUHLENBERGIA. Glume 2-valved; valves very minute, fringed, three times as short as the paleæ, the lower of which has a bristle. Scales ovate, obliquely truncate, gibbous. Seed naked, not furrowed. Panicle nearly simple, contracted or spreading.

POLYPOGON. Glume 2-valved, 1 flowered; valves nearly equal, obtuse at the end with a very long bristle, much longer than the somewhat cartilaginous paleæ. Lower paleæ below its end, which is entire, with a straight short tender bristle, upper bifid, toothed. Panicle contracted, like a spike.

AGROSTIS. Glume naked, beardless, 2-valved; valves concave, longer than the paleæ, which are 2, and enclose the seed.

TRICHODIUM. Glume 2-valved, 1-flowered; chaff one shorter than the glumes, bearded, and supported at the base by one or two fascicles of hairs. Seed loose, covered by the paleæ.

CINNA. Glume naked, beardless, with two concave valves, shorter than the paleæ, which are 2, nearly equal, concave, with long points; the outer one being bearded or beardless. Seed enclosed in the paleæ.

PSAMMA. Glumes nearly beardless. Paleæ under the end emarginate, mucronate, shorter than the glumes. Scales 2, subulate. Style 3-parted. Seed turbinate. Spike compound erect cylindrical.

CRYSIS. Glume 2-valved, 1-flowered, compressed, unequal. Paleæ 2, unequal, longer than the glume. Seeds loose, covered with the paleæ.

ALOPECURUS. Glume 2-valved, 1-flowered: valves somewhat equal, connate, distinct. Paleæ united into a bladder-like glume, split on one

side below the middle (generally) bearded. Scales linear entire. Spike compound, contracted, without involucre, branches very small, branching.

PHLEUM. Glume 2-valved, naked, with a point or little beard out of the nerve at its back; valves boat-form, including the paleæ, which are 2, boat-form and beardless. Beard of the glume lengthened. Second floret sessile.

CERECIA. Flowers lateral, 2-rowed, under a wide membranous boat-form rachis: calyx 2-valved. S.

PHALARIS. Glume 2-valved, naked, beardless: the valves or chaffs inclosing the paleæ, which are two and boat form, also beardless, and naked at the base, but supported by hairs, or accessory glumes.

BRACHYELYTRUM. MUHLENBERGIA. Calyx very minute; lower glume scarcely perceptible: corol with the lower valve terminated by a long bristle; upper one with a club-form rudiment at the base.

4. *Inflorescence panicled.* Spikelets solitary, 2 or many-flowered. Glumes with a keel. Paleæ of nearly the same texture as the glumes, the lower carinate or concave, always bearded; the upper with two keels. (Bromea, oats-like, chess-like.)

AIRA. Spikelets slender. Glume 2-flowered, rarely 3-flowered, beardless, 2-valved, equal to the florets or shorter; one of the florets on a stalk. Paleæ 2, equal, enclosing the seed when ripe.

AVENA. Glumes membranous, 2-7-flowered, longer than the floret: lower twice torn, or, with the upper, bifid toothed, sometimes eroded, having at the back a plaited twisted beard: scales ovate: seed coated, furrowed. Panicle compound, loose.

TRisetum. Lower paleæ with 2 bristles and a tender flexuose beard above the middle of its back; scales lanceolate. Other characters of *Avena* apply.

DANTHONIA. Lower paleæ 2-toothed, with a plaited twisted beard from between the teeth, upper obtusely truncated. Seed loose, not furrowed, panicle simple. Other characters of *Avena* apply.

TRICHOCHLOA. Calyx 2-valved, 1-flowered; glumes very minute: corol much larger than the calyx, 2-valved, naked at the base; lower valve convolute at the base, terminating in a long awn, not articulated.

CALAMAGROSTIS. Calyx 2-valved, 1-flowered, valves acute or acuminate: corol 2-valved, mostly shorter than the calyx, surrounded with long wool at the base. S.

OXYDENIA. Spike panicled, filiform; spikelets 3 or 4 flowered, alternating on a one-sided rachis: general calyx permanent, 2-valved, acuminate-subulate, 1-nerved, longer than the florets: corol 2-valved, small, caducous, obtuse with or without awns: seed roundish, naked, smooth, somewhat gibbous. S.

CHLORIS. Spikes digitate, 1-sided: calyx 2-valved, 2-to 4-flowered; valves keeled. Flowers unlike, abortive florets pedicelled. S.

ÆGILOPS. Calyx lateral, 2-valved, mostly 3-flowered; valves coriaceous, broad, rigid diverging awns numerous; corol 2-valved, outer 2-or 3-awned: florets, intermediate, barren, lateral, perfect, sessile. S.

SESLERIA. Common involucre many-leaved: the leaflets sometimes deciduous. Glume 3-4-flowered. Valves unequal, shorter than the stalked florets. Lower paleæ irregularly 2-toothed, bristlebearing. Scales longer than the ovary, subulate. Spikes compound. S.

KOELERIA. Spikelets compressed. Glume 2 or 3-flowered, beardless, 2-valved; the valves shorter than the lowest floret. Paleae 2, the outer beardless, or bearded under the point.

DACTYLIS. Spikelets heaped in a head, 1-sided. Glume 2-7-flowered. Lower paleae under the end which is emarginate, bristlebearing, upper bifid toothed. Scales hairy. Seed loose, not furrowed. Panicle compound with short branches.

GLYCERIA. Spikelet slender. Glume 5-7 flowered. Valves 2, truncate with transparent membranous edges, shorter than the florets. Lower paleae eroded or many-toothed, boatform, embracing the upper, which is bifid toothed. Scales connate. Seed furrowed. Panicle nearly simple.

FESTUCA. Glume beardless, 2-valved; valves nearly equal, shorter than the lowest floret. Paleae 2, the outer one bearded at the end. Seed enclosed in the paleae.

BROMUS. Glume 3-20-flowered. Valves shorter than the floret, which are imbricated in the rows. Lower paleae cordate, emarginate below the end, sometimes torn in two with a strait beard. Scales ovate smooth. Seed coated, furrowed. Panicle compound.

ARRHENANTHEMUM. Calyx membranaceous, 2-flowered, rather shorter than the florets; lower floret bearing anthers; lower valve 2 cleft, awned below the middle: upper floret perfect; lower valve cleft, unarmed, or with a short awn below the tip.

UNIOLA. Spikelets compressed. Florets imbricated in two rows, the lower only abortive. Glume 3-20-flowered, shorter than the florets. Lower paleae navicular at the end, abruptly cut off and mucronate between the lobes, the upper subulate somewhat bifid-toothed. Scales bifid. Seeds turbinate, with two horns, not furrowed. Panicle compound, loose.

PHRAGMITES. Calyx 5-7-flowered; the florets on villose pedicels, excepting that the lowest is sessile, and naked at the base; lower valve elongated, acuminate, involute; upper one somewhat conduplicate.

TRICUSPIS. **WINDSORIA.** Glume 5-7-flowered. Valves navicular, shorter than the florets. Lower paleae bifid-toothed, between the teeth and on each side mucronate: the upper truncate, almost emarginate. Seed 2-horned.

URALEPSIS. Calyx scariosa, 2-valved, 2 or 3-flowered: corol 2-valved stiped; outer valve with hairy nerves much longer than the calyx, and tricuspidate, with the middle cusp longest, and terminated with an awn; inner valve short and arched: seed arilled: florets alternate and distinct, both flowers and culm purple. (purple hair-grass.)

CERATOCHLOA. Glume 12-18-flowered. Valves shorter than the florets. Paleae bifid, toothed; the lower mucronate between the teeth. Ovary 3-horned. Seed coated, furrowed, 3-horned. Panicle nearly simple. Spikelets compressed. Florets imbricated in two rows.

BECKMANNIA. Spikelets 1-sided; 3-5-flowered. Glumes unequal, navicular, with a little stalk at the base, obtuse at the end, spatulate, nearly the length of the florets. Paleae nearly equal. Scales lanceolate. Seed loose, not furrowed. Spike compound; 3 spikelets in each tooth of the rachis.

MELICA. Glume unequal, 2-5-flowered, membranous, nearly the length of the florets, of which the upper are incomplete, abortive and

stalked. Scales truncate, fringed. Seed loose, not furrowed: panicle simple or compound

BRIZA. Glumes navicular, compressed, nearly cordate at the base, many-flowered—3 to 14. Shorter than the florets which are imbricate in two rows. Lower paleae cordate at the base, embracing the upper which is nearly round and much shorter. Seed with two short filiform beaks. Panicle compound, loose; branches pendulous.

POA. Glume 2-20-flowered. Valves shorter than the florets. Paleae sometimes woolly at the base, the upper bifid-toothed; scales smooth. Seed furrowed. Panicle more or less branching or scattered.

SORGHUM. Florets in pairs, one perfect with a 3-valved corol, and sessile; the other staminate or neutral, and pedicelled. E.

5. *Inflorescence spiked.* Spikelets solitary, seldom many-flowered (from 3 to 9) with the upper flower abortive and differently formed. Glumes with a keel not opposite. Lower paleae generally bearded, seldom beardless, the upper with two keels, (Chloridea, couch-grass like.)

ELEusine Glume 5-7-flowered: valves obtuse: paleae obtuse, upper bifid toothed: scales truncate, imbricate. Seed enclosed in a separate membrane, broadly and deeply furrowed. Inflorescence digitate. Spikelets 4-5, erect 1-sided.

AGROPYRON. Spikelets sessile on the teeth of the rachis, 3 to 9-flowered: glumes lanceolate, keeled: corol with the lower valve mucronate, or ending in a subulate bristle.

ATHEROPOGON. Spikes in unilateral racemes: calyx 2-valved, membranaceous, 2-flowered; inferior valve bristle-form: perfect floret 2-valved; inferior valve 3-toothed or 3-bristled; superior valve bifid: abortive floret pedicled, 2-valved, 3-bristled.

CYNODON. Spikelets 1-sided in a simple row. Glumes membranous, persistent, shorter than the florets, and only embracing them at the base. Fertile florets with the upper paleae bifid-toothed. A rudiment of an abortive floret, stalked, smooth, clavate. Scales truncate. Seed loose, not furrowed. Spike digitate. Spikelets 4-5, filiform simple, slender.

GYMNOPOGON. **ANTHOPOGON.** Calyx 2-valved keeled, nearly equal, longer than the corol: valves of the corol nearly equal; a straight bristle a little below the tip of the lower one; rudiment awn-form.

AULAXANTHUS. **AULAXIA.** Calyx 2-valved, 1-flowered, with the rudiment of a second; valves equal, furrowed, the furrows villous: corol with 2 nearly equal valves.

6. *Inflorescence spiked.* Spikelets solitary, in pairs or several together, 1-flowered, or many-flowered. Glumes opposite, equal. Lower paleae bearded or beardless, upper with two keels. (Cerealina, wheat-like.)

TRITICUM. Glume 2-valved, many flowered, shorter than the spikelet: the valves nearly equal, beardless, or with one beard enclosing the florets. Paleae 2, one of them being bearded from the end. Seed enclosed in the paleae, rarely otherwise. Varying by culture.

LOLIUM. Spikelets sessile, to the lowest a glume of one valve, to the uppermost of two opposite valves. Lower paleae with mucro or bristle at the end; upper membranous, bifid-toothed. Scales with two unequal teeth. Seed furrowed.

ELYMUS. Spikelets in each tooth of the rachis, two or more 3-9-flow-

ered. Glume 2-valved nearly equal, rarely absent, or nearly so. Lower paleae entire with a bristle which is sometimes very short, upper somewhat bifid-toothed. Scales ovate, hairy. Seed furrowed. Spike simple.

SECALE. Spikelets in each tooth of the rachis solitary, 2-3-flowered; the two lower florets fertile, sessile, opposite; the upper abortive. Glumes subulate, opposite, entire, shorter than the florets. Lower paleae entire, with a very long bristle, upper bifid-toothed. Scales obovate, hairy. Seed coated, furrowed. E.

HORDEUM. Spikelets 1-flowered, three together, the two lateral often barren. Glumes 2, subulate. Paleae 2, the lower bearded. Scales 2. Stigmas feathery. Seed coated with the paleae. Varying by culture.

7. *Inflorescence spiked*, or paniced, jointed. Spikelets generally in pairs, 1 or 2-flowered, the one sessile the other stalked, and usually not perfect. Glumes of a stouter texture than the paleae, neither keeled nor opposite. Paleae very delicate and membranous, not with a keel; the lower commonly bearded. (Saccharina, sugar-cane.)

SACCHARUM. Glume 2-valved, valves 2-flowered, enveloped in long wool. Lower floret neuter with one paleae, upper perfect with two paleae, the upper of which is very small or obsolete. E.

8. *Inflorescence paniced.* Spikelets solitary, 1-flowered. (Oryza, rice-like.)

LEERSIA. Spikelets 1-flowered. Glumes 0. Paleae 2, beardless, keeled, compressed. Scales 2. Stamens 3-6. Stigmas very finely cut. Seed loose, enclosed in the paleae.

9. *Shrubby, paniced; panicles many-flowered.*

DIARRHENA. Glume 2-valved: valves navicular, rigid, the lower smaller, shorter than the florets. Lower paleae navicular, rigid, upper membranous, the edges broad, folded back. Scales 2, ovate, entire. Ovary with a hood. Seed furrowed, hardened, shining, loose.

ARUNDINARIA. Glume 5-7-flowered. Valves unequal, with stalked florets. Lower paleae very acute. Upper bifid toothed. Scales 3, smooth; stigmas 3, feathery styles. Scales 3, smooth. Stigmas 3, feathery. Styles 3. S.

ORDER III. TRIGINIA.

3 Stamens. 3 Styles.

HOLOSTEUM. Calyx 5-leaved. Petals 5. Caps. sub-cylindrical, 1-celled, opening at the end, 6-valved, many-seeded.

POLYCARPON. Cal. 5-leaved, 5-cornered. Petals 5, very small, ovate. Caps. 1-celled, 3-4-valved; valves lanceolate, twisted inwards. Seeds many. S.

LECHEA. Cal. 3-leaved. Petals 3, linear. Caps. 3-celled, 3-valved, and as many inner valves. Seed 1.

ERIOCAULON. Common calyx, an imbricated head. Petals 3, equal. Stamens above the ovary. Monoecious.

MOLLUGO. Calyx 5-leaved. Cor. 0. Caps. 3-celled, 3-valved.

MINUARTIA. Cal. 5-leaved. Cor. 0. Caps. 3-celled, 3-valved. Seeds a few.

QUERIA. Cal. 5-leaved, or 5-parted. Cor. 0. Caps. 1-celled. Seed 1.

PROSERPINACA. Calyx 3-parted, superior, permanent: cor. 0: nut bony, 3-sided, 3-celled, crowned by the calyx. (Mermaid weed.)

CLASS IV. TETRANDRIA.

4 Stamens.

This class is composed chiefly of ornamental or curious plants, mostly shrubs. Among the few plants used in the arts which it contains, may be mentioned the madder (*Rubia*,) Fuller's thistle (*Dipsacus*,) the holly (*Ilex*,) The class is made up of a miscellaneous assemblage of species, with few characters in common.

ORDER I. MONOGYNIA.

4 Stamens. 1 Style.

1. *Flowers incomplete, (no corol?) inferior.*

POTHOS. Spathe 1-leaved. Spadix cylindrical, simple, covered with flowers. Cal. 4-leaved. Stamens next the ovary. Berry 2-seeded.

RIVINA. Cal. 4-leaved, persistent. Berry 1-seeded, with a lenti-form rough seed.

CAMPHOROSMA. Calyx urceolate with two opposite and alternate teeth, very small. Caps. 1-seeded. Stamens exsert.

ALCHEMILLA. Cal. 8-cleft, the alternate segments smallest. Style from the base of the ovary. Seed 1, naked, included in the calyx.

SANGUISORBA. Cal. colored, 4-lobed with 2-scales at the base: caps. 4-cornered, enclosed in the calyx, 1-2-celled.

2. *Flowers incomplete, superior.*

ISNARDIA. Calyx companulate, adhering to the ovary, 4-cleft. Caps. 4-celled, surrounded by the calyx, 4-cornered, many-seeded.

ELAEAGNUS. Cal. 4-8-cleft companulate, on the out-side rugose, inside colored, deciduous. Filament very-short, between the segments of the calyx. Styles short. Drupe ovate, with an oblong one-seeded nut.

3. *Flowers monopetalous, 1-seeded or dioecous, inferior.*

HOUSTONIA. Cal. 5-toothed: cor. tubular. Caps. 2-celled, 2-valved, 2-seeded.

4. *Flowers monopetalous, 1-seeded, or dioecous, superior.*

DIPSACUS. Common calyx many leaved; proper, superior. Cor. tubular, 4-cleft. Seed 1, crowned by the calyx. Recept. conical, chaffy. Pappus cross-shaped, entire.

SCABIOSA. Common calyx many-leaved; proper, double pappus-shaped, variously split. Receptacle chaffy. E.

GALIUM. Cal. an obsolete superior edge. Cor. wheel-form. Seeds 2: globose.

RUBIA. Cal. an obsolete superior edge. Cor. wheel-form, sub-campanulate. Berries 2, 1-seeded. Stamens 4-5. S.

SPERMACOCE. Calyx a 4-toothed edge. Corol, monopetalous, funnel-form. Caps. 2-celled, not divisible in two, 2-toothed. Seeds with their edges rolled together over their sides.

5. *Flowers monopetalous, many seeded, inferior.*

CALLICARPA. Calyx 4-toothed. Corol tubular, campanulate, 4-cleft. Stamens exserted. Berry 4-seeded.

CEPHALANTHUS. Common cal. none; proper, as well as corolla, 4-toothed, tubular funnel-form. Receptacle globose. Caps. 2-4-celled, not splitting. Seeds solitary by abortion, oblong.

CENTUNCULUS. Cal. 4-cleft. Corol 4-cleft, tubular with a spreading limb. Stamens short. Caps. 2-celled, cut round, many-seeded.

PLANTAGO. Cal. 4-cleft. Cor. quadrifid, with a reflexed limb. Stamens very long. Caps. 2-celled, cut round.

EXACUM. Calyx 4-leaved. Cor. somewhat bell-shaped, 4-cleft, with a globose tube. Caps. compressed, 2-furrowed, 2-celled, many-seeded, splitting at the end.

FRASERA. Cal. deeply 4-parted, spreading. Corol much larger than the calyx, very deeply 4-parted, spreading, the segments oval, bearded with a gland in the middle. Stamens shorter than corolla, with anthers $\frac{1}{2}$ divided at the base. Stigmas 2, thick, glandular. Caps. oval, much compressed, 1-celled, 2-valved at the edge. Seeds 8-12, elliptical, with a membranous edge.

BARTONIA. Calyx 4-parted, close-pressed, permanent: corol 4-cleft or 4-parted, bell-form, permanent: stigma thick glandulous, sub-bifid: capsule 1-celled, 2-valved, many-seeded. (Screw-stem.)

SWERTIA. Calyx flat, 4 or 5-parted: corol 4-parted, wheel-form with nectariferous pores at the base of the divisions: germ tapering to a point: style short, terminating in two stigmas: capsule 1-celled, 2-valved, acuminate. (False gentian.)

LYCIUM. Corol tubular, having the throat closed by the beards of the filaments: stamens often 5: berry 2-celled, many-seeded. (Matrimony.) S.

6. *Flowers monopetalous, 2 or many-seeded, superior.*

CENTAURELLA. Calyx 4-parted, close-pressed: corol somewhat bell-form, 4-parted, segments sub-erect: stigma thick, glandulous, sub-bifid: capsule 1-celled, 2-valved, many-seeded, surrounded by the permanent calyx and corol.

MITCHELLA. Cal. 2 on one ovary, 4-parted, cor. funnel-shaped, hairy within; stigmas 4: berry bifid, 4-seeded.

OLDENLANDIA. **HEDYOTIS.** Calyx 5-toothed, persistent; corol of 5-petals inserted into the calyx.

LINNAEA. Calyx double: that of the fruit 2-leaved inferior; that of the flower 5-parted: corol bell-form, 5-lobed: stamens somewhat didynamous: stigma globose: berry 3-celled, dry, generally producing a perfect seed in but one cell. (Twin-flower.)

POLYPRENUM. Calyx 4-parted: corol 4-cleft, wheel-form, bearded at the orifice: stamens included: capsules compressed: 2-celled, many-seeded. S.

ALLIONIA. Common calyx oblong, simple, 3-flowered; proper calyx obsolete: corol irregular: receptacle naked. S.

7. *Flowers polypetalous, inferior.*

PTELEA. Cal. 4-parted: Pet. coriaceous: stigmas 2: samara roundish with a 1-seeded centre, or 2-celled, 2-seeded.

AMMANNIA. Cal. 1-leaved, companulate, plaited, 8-toothed: pet. 4, inserted in the calyx or very often none: capsule 2-4-celled, many-seeded.

8. *Flowers polypetalous, superior.*

CORNUS. Involucre 4-leaved in some: Cal. 4-toothed: pet. 4: drupe with a 2-celled nut.

LUDWIGIA. Cal. 4-parted, superior, with long persistent sepals: cor. 4-petals or 0; caps. 4 cornered, 4-celled, crowned, inferior, many-seeded.

ORDER II. DIGYNIA.

4 *Stamens. 2 Styles.*

HAMAMELIS. Involucre 3-leaved: sepals 4: petals 4, linear very long: nut 2-horned, 2-celled.

APHANES. Calyx 2-cleft, alternate segments minute: petals none: stamens minute: styles 2: seeds 2, covered by the converging calyx, one of them often abortive: stamens 1, 2, and 4. S.

ORDER IV. TETRAGYNIA.

4 *Stamens. 4 Styles.*

MYGINDA. Cal. 4-toothed, very small, persistent: pet. 4, round, flat, spreading: stamens shorter than corolla: styles short: stigma 2-4: Drupe globose, 1-celled, with a 1-seeded nut. S.

ILEX. Cal. 4-5-toothed: cor. rotate, 4-cleft: style 0: berry 4-seeded.

POTAMOGETON. Sepals 4: pet. 0: style 0: seeds 4, sessile.

RUPPIA. Cal. and cor. 0: seeds 4, stiped.

SAGINA. Sepals 4: petals 4: caps. 4-celled, 4-valved, many-seeded.

TILLAEA. Cal. 3-5-parted: pet. 3-5, equal: caps. 3-5, 2 or many-seeded, opening inwards. Nectary none.

CLASS V. PENTANDRIA.

5 *Stamens.*

One of the most extensive of the Linnaean classes, containing about a fifth part of all phaenogamous plants. It includes the whole of the Boragineae or Asperifoliae and Umbelliferae; nearly all Primulaceae. Unbelliferous plants contain numerous species; some of which, like the *Cicuta virosa*, *Conium maculatum* &c., are dangerous poisons; and others which are useful to mankind, either as luxuries or necessities. The seeds of caraway, coriander, &c., are commonly used by the confectioner; of dill and anise by the distiller; the blanched stems of celery and sweet fennel, and the roots and leaves of many others, are among the best of vegetables. Great difficulty exists in ascertaining upon what principles the genera should be divided. Linnaeus, contrary to his usual practice, attempted to derive their character from the absence or presence of the involucre: and Sprengel, from peculiarities in the fruit, or, as it is familiarly called, in the seeds. In this work the arrangement of Sir James E. Smith has been adopted, as being the most simple of all that has published, and the most easy of application.

ORDER I. MONGYNIA.

5 Stamens. 1 Style.

1. *Flowers monopetalous, inferior, (appear as if superior) seed 1, naked.*

MIRABILIS. Nut below the corolla, which is funnel-shaped: stigma globose, a little warted. E.

2. *Flowers monopetalous, inferior. Seeds 2 or more, naked.*

HELIOTROPIMUM. Cal. 5-parted: cor. hypocrateriform, orifice without teeth, limb 5-cleft, sinuses plaited, simple, or toothed: stamens included: stigma peltate: nuts 4, cohering without a common receptacle. S.

MYOSOTIS. Cal. 5-parted: cor. salver-form, closed with scales: limb 5-parted, obtuse: stamens included: anthers peltate: stigma capitate: nuts 4, distinct, perforated at the base.

ROCHELLIA. Calyx 5-parted: coral salver-form, throat closed with converging scales: seeds prickly, compressed, affixed latterly to the style.

LITHOSPERMUM. Cal. 5-parted, persistent: cor. funnel-shaped, with a half 5-cleft obtuse limb and an open orifice: anthers included: stigma obtuse, bifid: seeds 4, hard, smooth, closed at the base.

BATSCHIA. Calyx deeply 5-parted; cor. salver-form with a hairy ring at the base inside, an open orifice, and rounded segments: stigma emarginate: seeds hard, shining.

ANCHUSA. Cal. 5-cleft, persistent: cor. funnel-shaped, with a half 5-cleft spreading limb, orifice closed with 5 prominent scales: anthers included: stigma emarginate: seeds gibbous, with a sculptured surface. E.

SYMPHYTUM. Cal. 5-parted, acute: cor. cylindrical, campanulate, with a short tube and a tubular inflated limb, orifice with 5-subulate rays conniving into a cone: stigma simple: seeds gibbous, not pierced at base. E.

ONOSMODIUM. Cal. deeply 5-parted: cor. oblong, campanulate, with a ventricose half 5-cleft limb, the edges of which are inflated, orifice open: anthers sagittate, included.

CYNOGLOSSUM. Cal. 5-parted: cor. short, funnel shaped, with a 5-parted obtuse limb; orifice closed by scales: stamens included: stigma capitate: nuts depressed, attached to a central column.

PULMONARIA. Cal. prismatic, 5-cornered, 5-toothed: cor. funnel-shaped, with a cylindrical tube, open orifice, and obtuse 5-lobed limb: stigma obtuse: seeds 4, obtuse, rounded.

BORAGO. Cal. 5-parted: cor. rotate, with acute segments; orifice crowned: filaments conniving: seed rounded, closed at the base, rugose, inserted lengthwise into an excavated receptacle. E.

LYCOPSIS. Cor. funnel-shaped, 5-lobed with a covered tube and obtuse limb: scales at the orifice: stigma emarginate: nuts hallowed at base.

ECHIMUM. Cal. 5-parted, subulate: cor. campanulate, with unequal obtuse segments, the 2 upper the longest: orifice open, filaments unequal, declinate: stigma obtuse: seeds roundish, warted, not open at the base.

3. *Flowers monopetalous, inferior. Seeds in a capsule or dry drupe.*

ANDROSACE. Caps. 1-celled: Corolla salver-form, contracted at the orifice: stigma globose.

PRIMULA. Caps. 1-celled: corolla funnel-shaped, pervious at the orifice: stigma globose.

DODECATHEON. Caps. 1-celled, oblong; corolla reflexed: stigma obtuse.

HOTTONIA. Caps. 1-celled: corolla with the tube below the stamens: stigma globose.

LYSIMACHIA. Caps. 1-celled, 10-valved: corolla rotate: stigma obtuse.

ANAGALLIS. Caps. 1-celled, cut round: corolla rotate; stigma capitate.

DIAPENSIA. Caps. 3-celled: corolla salver-form: cal. 8-leaved.

GALAX. Caps. 1-celled, 2-valved: corolla salver-form: stigma roundish. S.

MENYANTHES. Caps. 1-celled: corolla villous, spreading: stigma bifid: cal. 5-parted.

VILLARSIA. Caps. many-seeded, 2-valved: cor. rotate, limb spreading, 5-parted, flat, bearded or scaly at the base: glands 5, hypogynous.

SABBATTIA. Corol with an urceolate tube and limb 5-12-parted: stigmas 2-parted, with spiral divisions: anthers, at length, revolute.

PHLOX. Caps. 3-celled: corolla salver-form, with a curved tube. Stigma trifid.

POLEMONIUM. Caps. 3-celled: corolla 5-parted. Stamens placed on the valves.

HYDROPHYLLUM. Caps. 1-celled, 2-valved: corolla with 5-nectaries: stigma bifid.

PHACELIA. Caps. 2-valved, 4-seeded. Cal. persistent. Cor. campanulate, 5-cleft, with 5 furrows inside the base. Stam. exserted. style short: stigmas 2, long.

VERBASCUM. Caps. 2-celled: corolla rotate: stigma obtuse: stamens declinate.

DATURA. Capsule 2-celled, 4-valved: corolla funnel-shaped: calyx deciduous.

LYSIANTHUS. Caps. 2-celled, many-seeded: corolla funnel-shaped, ventricose. Style persistent. S.

SPIGELIA. Caps. 2-celled, double: corolla funnel-shaped: stigma simple.

HYOSCYAMUS. Caps. 2-celled, with a lid: corolla funnel-shaped: stigma capitate. E.

NICOTIANA. Caps 2-celled: corolla funnel-shaped: stigma emarginate. S.

IPOMAEA. Caps. 3-celled: corolla funnel-shaped: stigma capitate.

CONVOLVUBUS. Caps. 2-celled, 2-seeded: cor. campanulate: stigma 2-cleft.

NEMOPHILA. Ovary 1-celled, with 2-parietal placentas, each bearing 2 distant ovules. Capsule 1-celled, with fleshy placentas fixed to a longitudinal dorsal axis, otherwise loose, bearing the seeds on their inner surface.

CANTUA. IPOMERIA. Caps. 3-celled, 3-valved: seeds winged: corolla funnel-shaped. Stigma trifid. S.

AZALEA. Caps. 5-celled: corolla campanulate: stigma obtuse.

OPHIORHIZA. Caps. 2-celled, 2-parted: corolla funnel-shaped, vil-
lous at mouth, with acute segments. Stigma bifid.

IPOMERIA. Calyx somewhat bell-form, membranaceous at the base,
3-cleft corol, funnel-form, 5-lobed, entire: stamens unequal, exsert: stig-
ma 3-cleft: capsule 3-sided, 3-celled, 3-valved, many-seeded; seeds an-
gular, in 2 rows.

COLLOMIA. Calyx wine-glass form, large, 5-cleft, acute: corol fun-
nel-form, with 5 short oval-oblong lobes; tube straight, long, slender:
capsule 3-cornered, 3 celled, 3-seeded, and 3 abcordate valves; seed ob-
long, angular, with a mucilaginous covering.

4. *Flowers monopetalous, inferior. Seeds in a follicle.*

VINCA. Cal. 5-cleft: cor. salver-form, plaited at the orifice, with
flat segments, truncate at the end: filaments at the end dilated into
concave scales: glands 2 at base of ovary. E.

ECHITES. Cor. salver-form, with segments of the limb unequal-sided:
ovaries 2: style 1, filiform: follicles slender.

AMSONIA. Cor. funnel-shaped: closed at the orifice, with a 5-lobed
limb: stigma capitate, surrounded by a membranous angle: seeds ob-
liquely truncate, naked.

5. *Flowers monopetalous, inferior. Seeds in a drupe or berry.*

BUMELIA. Cal. 5-parted, very small: cor. campanulate, 5-cleft or
salver-form, with teeth between the divisions of limb. Nectary, a 5-
leaved crown, adhering to the tube of the corolla: drupe ovate or
globose. S.

ELLISIA. Cal. 8-parted: cor. funnel-shaped: stamens inserted in
base of corolla: stigma simple or bifid: berry dry, lag-like, 2-valv-
ed, 2-celled, in an enlarged stellate calyx: seeds globose, black, dot-
ted. S.

ATROPA. Cor. campanulate: stamens distant: berry globose, 2-
celled, sitting on the calyx. E.

PHYSALIS. Cor. campanulate, rotate: stamens conniving: berry
within the inflated calyx, 2-celled.

SOLANUM. Cal. persistent: cor. rotate or campanulate, 5-lobed,
plaited. Anthers in some degree united, opening by a double pore at
the end. Berry 2-celled, many-seeded.

CAPSICUM. Cor. rotate: berry without juice. E.

ANDROCERA. Calyx inflated, 5-cleft, caducous: corol sub-ringent,
wheel-form, 5-cleft: stamens unconnected, unequal, declined, one larger
and horn-form: anther with 2 terminal pores: style simple, declined;
stigma not distinct: berry dry; seed without margin, rugose.

6. *Flowers monopetalous, superior. Seeds in a capsule.*

CAMPANULA. Cor. campanulate, closed at bottom with s'aminiferous
valves: stigma 3-5-cleft: caps. inferior, opening by lateral pores.

LOBELIA. Cor. with the tube split on one side, the limb 2-lipped,
5-parted: stigma 2-lobed, sometimes entire: caps. 2-3-celled, 2-valved,
at the end.

SAMOLUS. Cor. salver-form, 5-cleft, with scales between the divis,

ions: stamens inserted into the tube: caps. 1-celled, 5-toothed, many-seeded.

7. *Flowers monopetalous, superior. Seeds in a drupe or berry.*

LONICERA. Cal. 5-toothed: cor. tubular, 5-cleft, irregular: berry inferior, 2-3-4-celled, many-seeded.

SYMPHORIA. Cal. 4-toothed: cor. trifid, nearly equal: berry crowned, 4-celled, 4-seeded; 2 cells, sometimes abortive.

XYLOSTEUM. Cal. 5-toothed, with 2 connate bracts: corol tubular; border 5-parted, nearly equal: berries in pairs, united at their bases, or combined in one: 2-celled.

DIERVILLA. Cal. oblong 5-cleft: cor. twice as long, funnel-shaped, 5-cleft, spreading: caps. oblong, 4-celled, many-seeded.

TRIOSTEUM. Cal. 5-cleft: cor. scarcely longer, tubular, 5-lobed: berry 3-celled, 3-seeded, inferior.

CHIOCOCCA. Cor. funnel-shaped, equal: berry compressed, double, 2-seeded: seeds oblong, compressed. S.

PINCKNEYA. Sepals unequal, one or two of them foliaceous: cor. a long tube: filaments in the base of the tube: caps. 2-valved; valves bearing the divisions in the middle. S.

PSYCHOTRIA. Tube of the calyx ovate, crowned: limb short, 5-lobed, 5-toothed or sub-entire: corol funnel-form, short, 5-cleft: throat bearded: stigma 2-cleft: berry drupe-like. S.

8. *Flowers polypetalous, inferior. Seeds in a drupe, berry, or berried capsule.*

VITIS. Petals cohering at the end like a calyptré, withering: berry 5-seeded.

AMPELOMPSIS. CISSUS. Cal. entire: petals cohering at the end, withering: stigma capitate: ovary immersed in the disk, 2-4-seeded.

RHAMNUS. Cal. campanulate, 4-5-cleft: cor. scales protecting the stamens, inserted into the calyx. Stigmas 1-2-5-cleft. Berry 3-4-seeded.

ZIZYPHUS. Cal. spreading 5-cleft: petals 5: discus fleshly, obicular, surrounding the ovary; styles 2: drupe with a 1 or 2-seeded nut. Flowers axillary. S.

CELASTRUS. Cor. 5-petalled, spreading: caps. 3, angular, 3-celled; seeds with an aril.

EUONYMUS. Pet. 5: caps. 5-cornered, 3-celled, 3-valved, colored. Seeds with an aril.

CEANOTHUS. Pet. 5, bagged, vaulted. Berry dry, 3-celled, 3-seeded.

9. *Flowers Polypetalous, inferior. Seeds in a capsule.*

ITEA. Cal. 5-cleft, campanulate: pet. 5, linear, reflexed, inserted into the calyx: stigma capitate, 2-lobed: caps. 2-celled, 2-valved, with the valves bent inwards.

CYRILLA. Cal. very small, turbinate, 5-parted, superior. Pet. 5, stellate, stiffish: styles 2-fid: berry dry, 2-celled: seeds solitary, attached by a little cord. S.

CLAYTONIA. Cal. 2-valved: pet. 5: stigma 3-fid: caps. 3-valved, 1-celled, 3-seeded.

IMPATIENS. Cal. 2-leaved. Pet. 5, irregular, with one cuculate. Anthers at first subconnate: caps. superior, 5-valved.

VIOLA. Sepals 5; petals 5; irregular, connate behind: anthers adhering at the end by a membrane, or distinct: caps. 3-valved, 1-seeded.

IONIDIUM. Sepals 5, produced at their base: cor. 2-lobed, without a spur. Anthers usually distinct: stigma simple: caps. 1-celled, 3-valved.

10. *Flowers polypetalous. Superior.*

HEDERA. Petals 5, oblong. Berry 5-seeded, surrounded by the calyx. E.

RIBES. Petals 5, with stamens, inserted into the calyx: style 2-fid. Berry many-seeded, inferior.

11. *Flowers incomplete. Inferior.*

ACHYRANTHES. Sepals 5: scales 5: connate at the base into a tube, at the end fringed and alternate with the stamens: stigma 2-fid: seed solitary, crowned by the conniving sepals.

PHILOXERUS. Sepals 5, irregular: stamens 5, united at the base into a little cup, shorter than the ovary. Anthers 1-celled; style 1: utricle 1-seeded, without valves.

GOMPHRENA. Sepals 5, colored; outer 3, conniving, keeled: pet. 5, rude villous. Nect. cylindrical, 5-toothed: caps. eut round, 1-seeded: style half-bifid. E.

GLAUX. Cal. 1-leaved, colored, 5-lobed: cor. 0: caps. 1-celled, 5-valved, 5-seeded, surrounded by a calyx.

12. *Flowers incomplete, superior.*

THESIUM. **COMANDRA.** Cal. 1-leaved, into which the stamens are inserted: nect. inferior, 1-seeded, surrounded by the persistent calyx.

ORDER II. DYGINIA.

5 Stamens. 2 Styles. (Aselepiadeae.)

1. *Flowers monopetalous, inferior.* Fruit, a follicle or capsule.

APOCYNUM. Cor. campanulate: filaments 5, alternate with the stamens: style 0: stigma broad: follicles long, linear.

PERIPLOCA. Anthers bearded at back: pollen-masses solitary, made up of 4 confluent ones: stigma blunt: follicles cylindrical, divaricating, smooth: seed comose.

CYNANCHUM. Cor. rotate, 5-parted: pollen-masses inflated: stigma with a little point. Follicles smooth.

ASCLEPIAS. Corona 5-leaved, with a process on the inside: pollen-masses fixed by a fine end. Stigma depressed, blunt.

GONOLOBUS. Cor. rotate, 5-parted: corona shield-shaped. Anthers opening across, terminated by a membrane: stigma flat, depressed.

2. *Flowers monopetalous, inferior.* Fruit a capsule.

SWERTIA. Caps. of 1-cell: cor. wheel-shaped, with 2 nectariferous pores at the base of each segment.

GENTIANA. Caps. of 1-cell: cor. tubular at the base, destitute of nectariferous pores.

HYDROLEA. Caps. 2-celled, 2-valved: cor. rotate, campanulate: stamens inserted in the tube. S.

DICHONDRA. Cal. 5-parted, with spatulate segments: cor. short, campanulate, 5-parted. Stigma peltate, capitate: caps. compressed; 2-celled, 2-seeded: seeds round. S.

GELSEMIUM. Cal. 5-leaved, very small: corol funnel-form, border spreading, 5-lobed, nearly equal: capsule compressed, flat; 2-portible, 2-celled: seeds flat, attached to the margin of the valves.

3. *Flowers pentapetalous, inferior.*

HEUCHERA. Petals 5: caps. 2-celled, with 2 bracts.

PANAX. Polygamous: umbelled: involucre many-leaved: calyx 5-toothed in the perfect flower, superior: berry heart-form, 2 or 3-seeded: calyx in the staminate flower, entire.

SALSOLA. Caps. closed, imbricated in the fleshy calyx: seed with a spiral embryo.

ATRIPLEX. Polygamous: calyx 5-leaved, 5-parted, inferior: style 2-parted: seed 1, vertical; fruit depressed. Pistilate, flowers are intermixed, in which the calyx is 2-leaved or 2-parted.

CHENOPODIUM. Seed lenticular, truncated, superior.

BETA. Seed kidney-shaped, imbedded in the fleshy calyx.

ULMUS. Caps. closed, membranous, compressed, bordered, superior.

PLANERA. Cal. membranous, subcampanulate, 4 or 5-cleft: cor. 0: stigmas 2, oblong, glandular, spreading: caps. globose, membranous, 1-celled, not opening, either smooth or scaly, not winged, 1-seeded: stamens 4-6: polygamous. S.

CELTIS. Polygamous: perfect flowers have the calyx 5-parted: styles thickish, spreading: drupe 1-seeded: staminate flowers beneath the perfect ones, with 6-parted calyxes: stamens often 6.

KOCHIA. Cal. inferior, bell-form, 5-cleft, forming a permanent band around the fruit somewhat resembling 5-petals: corol none: styles short: stigmas 2 or 3, long, simple: seed incurved. S.

4. *Flowers pentapetalous superior. Seeds 2. (Umbelliferae.)*

a. *Fruit of a single or double globe.*

CORIANDRUM. Fruit a single or double globe, smooth without ribs: cal. broad, unequal: petals radiant: floral recept. none. E.

b. *Fruit beaked.*

URASPERMUM. MYRRHIS? SCANDIX. Seeds sub-linear, solid, acute-angled, not stirate; ribs 5, acute, hispid: style subulate, permanent: fruit stiped, oblanceolate. (Sweet cicely.)

CHAEROPHYLLUM. Beak shorter than the seeds, angular: fr. smooth, without ribs: cal. none: pet. inversely heart-shaped, rather unequal: fl. recept. wavy.

c. *Fruit solid, prickly, without a beak.*

ERYNGIUM. Fr. ovate, clothed with straight bristles: cal. pointed: pet. oblong, equal, inflexed, undivided: fl. aggregate: common recept. scaly.

SANICULA. Fr. ovate, clothed with hooked bristles: cal. acute: pet. lanceolate, inflexed, nearly equal: fl. separated, dissimilar.

DAUCUS. Fr. elliptic, oblong, compressed transversely. Seeds with.

four rows of flat prickles, and rough intermediate ribs: cal. obsolete; pet. inversely heart-shaped, unequal; fl. separated.

d. *Fruit, solid, nearly round, unarmed, without wings.*

ÆNANTHE. Fr. ribbed, somewhat spongy: cal. large, lanceolate, acute spreading, unequal; pet. inversely heart-shaped, very unequal; fl. recept. dilated, depressed: fl. separated.

SESEL. Common involucre 0, partial 5-leaved, sometimes 1-leaved: Fruit ovate, solid, with 5-acute ribs and furrowed, striated intervals.

THAPSIA. Fruit narrow, but little compressed, scarcely ribbed, with 2 dorsal and margined wings.

e. *Fruit solid, unarmed, without wings, compressed laterally, the diameter of its juncture being at least twice as narrow as the opposite diameter.*

Sium. Fr. ovate or orbicular, ribbed, furrowed: cal. small, acute, unequal, or obsolete: pet. inversely heart-shaped or obovate, equal: styles cylindrical, shorter than the petals. Fl. receptacle none. Fl. uniform, united.

Sison. Fr. ovate or nearly orbicular, ribbed: cal. obsolete or blunt: pet. elliptical or inversely heart-shaped, with an involute point, equal. Styles very short and thick. Fl. recept. none. Fl. uniform, united.

Cicuta. Fr. nearly orbicular, heart-shaped at the base, with 6 double ribs: cal. broad, acute, rather unequal: pet. ovate or slightly heart-shaped, nearly equal: style scarcely tumid at the base: fl. recept. depressed, withering: fl. uniform, nearly regular, united.

Conium. Fr. ovate, with 10 acute ribs, wavy in an unripe state: cal. obsolete: pet. inversely heart-shaped, slightly unequal: styles a little tumid at the base: fl. recept. dilated, depressed, wavy, permanent: fl. slightly irregular, united.

Zizia. Fr. broader than long: margin of the calyx obsolete, or with 5 short teeth: petals oval, tapering to a long point: seed flattish, terete-convex. (From Smyrnum.)

Apium. Fr. roundish-ovate, with 6 acute dorsal ribs: interstices flat: pet. roundish, with an inflexed point, very nearly equal: styles greatly swelled at the base: fl. recept. thin, orbicular, wavy: fl. nearly regular, united. E.

ANETHUM. Invol. none: pet. involute, yellow: seeds compressed, with 3-ribs; intervals once-banded. E.

CARUM. Fr. elliptic, oblong, with equidistant ribs; interstices convex: cal. minute, acute, often obsolete; pet. inversely heart-shaped, unequal: styles tumid at the base, subsequently elongated, widely spreading; fl. recept. angular, thin, wavy, permanent; fl. separated, irregular. E.

Cnidium. Fr. ovate, acute, with equidistant sharp ribs; interstices deep, concave; juncture contracted: cal. none: pet. equal, obovate or inversely heart-shaped: styles hemispherical at the base; subsequently elongated, spreading, cylindrical: fl. recept. annular, thin, undulated, erect, afterwards depressed: flower imperfectly separated, nearly regular.

PEUCEDANUM. Calyx minute, 5-toothed: petals oblong, incurved, equal: fruit oval, compressed, surrounded with a winged margin, having 5 striae on each seed, and elevated intervals; joining sides flat. S.

BUPLEURUM. Fr. ovate, oblong, obtuse, with prominent, acute, abrupt

ribs; interstices flat; juncture contracted; cal. none: pet. equal, broadish, wedge-shaped, very short, involute: styles very short, not extending beyond the circumference of their broad tumid bases: fl. recept. none: fl. all perfect and regular. E.

HYDROOTYLE Fl. nearly orbicular, rather broader than long, angular, much compressed, juncture very narrow: cal. none: pet. equal, ovate, spreading, undivided: styles cylindrical, shorter than the stamens, tumid at the base: fl. recept. none: fl. all perfect and regular.

f. *Fruit solid, unarmed, compressed transversely, the diameter of the juncture being much greater than the opposite diameter.*

ÆTHUSA. Seeds ovate, convex: with 5 tumid, rounded, acutely-keeled ribs; interstices deep, acute, angular: border none: cal. pointed, very minute: pet. inversely heart-shaped, rather angular: fl. recept. none: fl. all perfect, slightly radiant. S.

ANGELICA. Seeds elliptic-oblong, convex, with 3 dorsal wings and a narrow, flat, even border: cal. none: pet. lanceolate, flattish, undivided, contracted at each end equal: fl. recept. thin, wavy, narrow, permanent: fl. all perfect.

LIGUSTICUM. Seeds oblong, convex, with 3 dorsal and 2 marginal equal wings: cal. small, pointed, erect, broad at the base: pet. elliptical, flattish, undivided, contracted at each end, equal: fl. recept. none: fl. all perfect, regular.

FERULA. Fruit compressed, flat, thickened at the edge, with 3 obtuse dorsal ribs, and banded intervals and juncture: flowers polygamous: involucre various.

g. *Fruit thin and almost flat, compressed transversely, without dorsal wings.*

PASTINACA. Seeds elliptic, obovate with a slight notch at the summit, very nearly flat, with 3 dorsal ribs and 2 marginal ones: border narrow, flat, thin, even, smooth, and entire: cal. very minute, obsolete: pet. broadly lanceolate, involute, equal: fl. recept. broad, orbicular, wavy, rather thin, concealing the calyx: fl. regular, uniform, perfect.

HERACLEUM. Seeds inversely heart-shaped with a notch at the summit, very nearly flat, with 3 slender dorsal ribs, 2 distinct marginal ones, and 4 intermediate colored, depressed, abrupt lines from the top; border narrow, slightly tumid, smooth, even and entire: cal. of 5 small acute, evanescent teeth: pet. inversely heart-shaped, radiant: fl. recept. wavy, crenate, obtuse: fl. separated.

ORDER III. TRIGYNIA.

5 Stamens. 3 Styles.

1. *Flowers superior.*

VIBURNUM. Cor. 5-cleft: berry 1-seeded.

SAMBUCUS. Cor. 5-cleft: berry with 3 seeds.

2. *Flowers inferior.*

RHUS. Cal. 5-parted: petals 5: berry 1-seeded.

STAPHYLEA. Petals 5: caps. 2 or 3, inflated.

TURNERA. Cal. 5-cleft, infundibuli-form; the outer 2-leaved: petals 5, inserted in the calyx: stignas many-cleft: caps. 1-celled, 3-valved. S.

SAROTHTA. Cal. 5-parted: petals linear: capsules 1-celled, 3-valved, colored.

LEPUROPETALON. Cal. 5-parted: petals 5, resembling scales, inserted into the calyx: capsule free near the summit, 1-celled, 1-valved. S.

ORDER IV. TETRAGYNIA.

5 *Stamens.* 4 *Styles.*

PARNASSIA. Nectaries fringed with bristles bearing globes: caps. of 4 valves.

EVOLVULUS. Cal. 5-leaved: cor. rotate, companulate, with emarginate lobes: styles 2, deeply bifid: stigma simple: caps. 2-celled, 4-valved, 4-seeded, seeds 2. S.

ORDER V. PENTAGYNIA.

5 *Stamens.* 5 *Styles.*

1. *Flowers superior.*

ARALIA. Involucre very small; umbels globose: cal. very small, 5-toothed: petals 5, ovate, oblong, spreading, or reflexed: stignas nearly round, 5-10: berry roundish, crowned, 5-seeded; seeds hard, oblong.

2. *Flowers inferior.*

LINUM. Pet. 5: capsule of 10 cells.

DROCERA. Pet. 5: caps. of 3-valves, with many seeds.

STATICE. Cal. 2-leaved, entire, plaited, scorious: petals 5: seeds 1, superior: flowers scattered in a paniced or spiked scape.

ORDER XIII. POLYGYNIA.

5 *Stamens.* Many *Styles.*

MYOSURUS. Pet. 5, tubular, honey-bearing claws: seeds naked: cal. spurred at the base.

XANTHORHIZA. Cal. 0: petals 5: nectaries 5, stalked: caps. 5, 1-seeded.

SIBBALDIA. Cal. 10-cleft: petals 5, inserted in the calyx; styles from the side of the ovary: seeds 5.

CLASS VI. HEXANDRIA.

6 *Stamens.*

This class contains the most beautiful of the herbaceous plants of our gardens. With few exceptions, it is to a considerable degree a natural assemblage, comprehending a large proportion of those favorites of gardeners, the orders, Amaryllideæ, Asphodeleæ, Bromeliaceæ, Liliaceæ, and Melanthaceæ. The class also includes a few grasses and palms; to the same class are referred the lily of the valley, the Solomons seal:

and many other curious little plants. Hither also are referred the valuable rice, the curious bamboo, and the rush, some of the species of which are well known for their use in economical purposes, others as the most worthless weeds of our heatlis.

ORDER I. MONOGYNIA.

6 Stamens. 1 Style.

Monocotyledonous.

NARCISSUS. Sepals* 6, equal: cups funnel-shaped, of a single leaf: stamens inserted within the cup. E.

PANCRATIUM. Flower funnel-shaped, with a long tube: sepals 6: cup 12-cleft, membranous: stamens inserted on the edge of the cup. E.

BRODIAEA. Corol inferior, bell-form, 6-parted; filaments inserted in the throat of the corol: germ pedicelled: capsule 3-celled, many-seeded. S.

CRINUM. Corol superior, funnel-form, half 6-cleft; tube filiform; border spreading, recurved; segments subulate, channelled; filaments inserted on the throat of the corol, separate.

AGAVE. Flower erect, tubular or funnel-shaped: Filaments longer than flower, erect: capsule triangular, many-seeded.

PHALANGIUM. Corol inferior, 6-petaled, spreading; filaments smooth: capsule ovate: seeds angular.

PONTEDERIA. Flowers monosepalous, 6-cleft, 2-lipped: stamens inserted into the tube of the flower at the top: caps. 3-celled.

GALANTHUS. Sepals 3, concave: cup formed of 3 small emarginate sepals: stigma simple. E.

AMARYLLIS. Flower nodding, irregular, funnel-shaped, ringent: filaments declinate, unequal in proportion or direction: seeds flat, numerous.

POLYANTHES. Flower funnel-shaped, incurved: filaments inserted into the throat: ovary at the bottom of the tube. E.

HYPOXIS. Spathe 2-valved: flower 6-parted, superior: caps. long, narrow at the base: seeds roundish, naked.

a. *Perianth not colored, regular. Stems herbaceous.*

ACORUS. Spadix cylindrical, covered with florets: sepals 6, naked; styles 0: caps. 3-celled.

ORONTIUM. Spadix cylindrical, covered with florets: sepals 6, naked; style 0: follicles 1-seeded.

JUNCUS. Sepals 6, persistent; stigmas 3; caps. 1-celled, 3-valved: seeds very numerous.

LUZULA. Sepals 6: stigmas 3: caps. 1-celled, 3-valved, 3-seeded: seeds fixed to a central receptacle.

b. *Flower partly or wholly colored, regular.*

TRADESCANTIA. Cal. 3-leaved: petals 3: filaments with jointed hairs: caps. 3-celled.

* The colored blossom is here treated as a calyx by Lindley.

HEMEROCALLIS. Flower campanulate, with a cylindrical tube: stamens declinate: stigma small, simple, villous. E.

LILLUM. Sepals 6, campanulate, with a longitudinal honey-line, and generally reflexed: valves of the capsule connected by a mesh of hairs.

TULIPA. Sepals 6, campanulate: style 0. E.

FRITILLARIA. Sepals 6, campanulate, with a honey-pore above the claw. S.

ALETIRIS. Flower funnel-shaped, wrinkled: stamens inserted into base of segments: capsule 3-celled, with many-seeds.

CONOSTYLIS. Corol more than half inferior, 6-cleft, permanent, with branching hairs: anthers erect: style conic, 3-parted: stigma simple: capsule opening at top, 3-celled, 3-valved, many-seeded.

YUCCA. Flower campanulate, spreading: styles 0: caps. 3-6-celled, with a hole at the end. S.

ERYTHRONIUM. Sepals 6, campanulate: two little tubercles attached to the base of every other sepal.

UVULARIA. Sepals 6, erect: a hollow at the base of the sepals: filaments very short: flowers solitary, axillary: capsule compressed, 3-cornered: seeds with an aril.

STREPTOPUS. Sepals 6, campanulate: stigmas very short: berry globose, polished, papery: seeds naked.

CONVALLARIA. Flowers 6-cleft, campanulate: berry spotted, 3-celled.

ALLIUM. Flower 6-parted, spreading: spathe many-flowered: umbels clustered.

ORNITHOGALUM. Sepals 6, erect, persistent, spreading above the middle: filaments dilated at base, or subulate: caps. roundish, angular, 3-celled, seed roundish, naked: flowers white or green.

SCILLA. Sepals 6, spreading, deciduous: filaments filiform, attached to base of sepals: flowers blue or pink. S.

ASPHODELUS. Flower 6-parted, spreading: six valves covering the ovary. E.

NARTHECIUM. Sepals 6, spreading, persistent: filaments filiform, hairy: caps. prismatical: seeds with an appendage at each end.

ASPARAGUS. Flower 6-parted, erect; the 3 lower sepals reflexed at end: berry 3-celled, many-seeded. E.

HYACINTHUS. Flower erect, 6-cleft, with equal segments, stamens inserted in the middle of the flower: cells of capsule 2-seeded. E.

2. *Dicotyledonous.*

CAULOPHYLLUM. **LEONTICE.** Calyx inferior, 3-6-leaved, caducous: nectaries 6-subreniform, fleshy, glutinous at the margin, attached to the claws of the petals: seed naked, elevated on a stipe after having burst its caducous pericarp. The seed was formerly taken for a drupe until Brown detected the error.

DIPHYLLA. Cal. 3-leaved, deciduous: petals 6, opposite the calyx: anthers opening with a membrane dividing from the base to the tip: berry 1-celled: seeds 2-3, roundish. S.

PRINOS. Cal. 6-cleft: cor. monopetalous, rotate: berry 6-seeded.

BERBERIS. Cal. 5-leaved; petals 6, with glands upon their claws: styles 0: stigma umbilicate: berry 1-celled, 2-4-seeded.

FLOERKEA. Cal. 3-leaved, inferior: corol 3-petaled, shorter: style 2-cleft: capsule bladder-like, 2 or 3 grained.

TILLANDSIA. Cal. 3-cleft, sub-convolute, permanent: corol 3-cleft, bell-tubular: capsule 1 to 3-celled: seeds comose. S.

ORDER II. DIGYNIA.

6 Stamens. 2 Styles.

ORYZA. Glumes 2, 1-flowered: paleae 2, nearly equal, adhering to the seed. E.

NECTRIS. CABOMBA. Calyx inferior, 6-leaved: corol none: capsules 3, not opening: the calyx may be considered as 6-parted, and the 3 inner divisions as petal-like, obtuse, and smaller: the capsule is bladder-like, 1 or 2-seeded. S.

OXYRIA. Perianth simple, 4-leaved, 2 inner leaflets largest: corol none: nut 3-sided, with a broad membranaceous margin: stamens 2 to 6: stigma large, pluinose. S.

ORDER III. TRIGYNIA.

6 Stamens. 3 Styles.

1. Monocotyledonous.

SCHIEUCHZERIA. Sepals 6: anthesis linear: stigmas sessile, lateral: capsules inflated, distinct, 2-seeded.

TRIGLOCHIN. Sepals 6, the 3 outer in a different row from the inner: styles 0: capsule opening by the base.

ZIGADENUS. Calyx 6-leaved, spreading, with 2 glands above the narrow base of each leaf: stamens inserted in contact with the germ: capsule membranaceous, 3-celled, many-seeded. (Calyx is colored and corol-like.)

TOFIELDIA. Bracts 3: sepals 6: capsules 3, superior, united at the base, many-seeded.

MELANTHIUM. Polygamous. Flower rotate, 6-parted, with 2 glands at the base of each segment: filaments from the elongated claws of the flower: capsule 3-fid, 3-celled: seeds membranous.

GYROMIA. MEDIOLA. Flower 6-parted, revolute: berry 3-celled: styles 0.

XEROPHYLLUM. Flower 6-parted: stigmas 3, oblong, sessile: caps. 3-celled, with 2-seeded cells.

TRILLIUM. Cal. spreading, 3-leaved: petals 3: berry 3-celled.

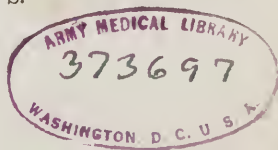
HELONIAS. Sepals 6: styles 3, distinct: capsule 3-celled, 3-horned, few-seeded.

NOLINEA. Flower 6-parted, spreading: style very short: capsule 3-cornered, membranous, 3-celled, opening by bipartible dissepiments: seeds solitary, convex on one side. S.

VERATRUM. Polygamous or dioecious. Calyx 0: corol 6-parted or 6-petalled, sessile, spreading, without glands: capsules 3, adnate, many-seeded. (The staminate flowers have the rudiment of a pistil.)

CHAMAEROPS. Flowers polygamous: spathe compressed; spadix branched; perianth 3-parted: corol 3-petalled: filaments partly united: drupe 3-celled, 2 of them often empty: the staminate flowers grow on distinct plants. S.

SABAL. Spathes partial: filaments free, thickened at base: 1-3-seeded: seed bony: embryo lateral. A palm. S.



CALOCHORTUS. Corol 6-parted, spreading; 3 inner segments larger, with the upper side woolly, and marked near the base with a roundish smooth spot: filaments short, inserted on the base of the petals; anthers arrow-form, erect: stigmas reflexed: capsule 3-celled. S.

Dicotyledonous.

RUMEX. Calyx 3-leaved: petals 3, conniving: seed 1, 3-cornered.

OXYRIA. Calyx 2-leaved: petals 2; styles 2.

ORDER XIII. POLYGYNIA.

6 Stamens. Many Styles.

WENDLANDIA. Sepals 6, petals 6, succulent: style reclinate: caps. 6, 1-celled, many-seeded. S.

ALISMA. Flower 6-parted; the 3 outer sepals falling off late, like a calyx; the 3 inner petaloid: stamens 6: ovaries indefinite in number, 1-seeded: capsules distinct, not opening.

CLASS VII. HEPTANDRIA.

7 Stamens.

A small class, of which the Horse-chesnut, *Æsculus* is the only remarkable genus.

ORDER I. MONOGYNIA.

7 Stamens. 1 Style.

TRIENTALIS. Cal. 7-leaved: cor. 7-parted, equal, flat: berry without juice.

ÆSCULUS. Cal. 1-leaved, inflated: cor. 4 or 5-petalled, unequal, pubescent. A sub.genus, *Pavia*, is distinguished by straight stamens, and capsules not prickly. Fruit of the genus large—leaves always consisting of 5, or more, leaflets.

CALLA. Spathe ovate: spadix covered: cal. 0: cor. 0. A berry.

ORDER IV. TETRAGYNIA.

7 Stamens. 4 Styles.

SAURURUS. Cal. a spike of 1-flowered scales: cor. 0: ovaries 4: berries 4, 1-seeded.

CLASS VIII. OCTANDRIA.

8 Stamens.

This is a class, which, with reference to the plants composing it, is of much consequence to the botanist and gardener, particularly the *Oenotheras*, *Epilobiums*, and *Polygonums*.

ORDER I. MONOGYNIA.

8 Stamens. 1 Style. Ovary Superior.

ELLIOTTIA. Calyx 4-toothed, inferior: corol deeply, 4-parted: stigma capitate. S.

AMYRIS. Flowers perfect: calyx 4-toothed: petals wedge-form, longer than the stamens: germ 1-celled: stigma sessile. S.

TROPEOLUM. Cal. 1-leaved, 5-cleft, spurred: petals 5, unequal: nuts coriaceous, furrowed: seed 1, roundish. E.

ERICA. Sepals 4, persistent: cor. 4-cleft, persistent. Filaments inserted in the receptacle: anthers bifid: caps. membranous, 4-8-celled. E.

MENZIESIA. Cal. 1-leaved: cor. 1-petalled, ovate: flam. inserted in the receptacle: caps. 4 celled, with the septa from the inflexed edges of the valve: seeds numerous.

ACER. Polygamous. Sometimes hexandrous: calyx 5-cleft: corol 4 or 5-petaled, or wanting: samaras 2, united at the base: 1-seeded, often one rudiment of a seed. (Maple.)

JEFFERSONIA. Sepals 5, colored, deciduous: petals 8, incurved, spreading: stamens surrounding the ovary: caps. obovate, stipitate, 1-celled, opening below the end.

DIRCA. Calyx 0: corol tubular; limb obsolete, unequal: stamens unequal, longer than the tube of the corol: style filiform; berry or drupe 1-seeded. The corol may be taken for a colored calyx. (Leather-wood.)

Ovary Inferior. Seeds many, or one.

RHEXIA. Cal. urceolate, 4 or 5-cl-ft; petals 4, inserted in the calyx, oblique, anthers declinate: caps. setose, 4-celled, inside the calyx: recept. lunate: seeds numerous cochleate.

ENOOTHERA. Cal. tubular, 4-cl-ft, with deciduous deflexed segments: petals 4, inserted in calyx: stigma 4-cleft: caps. 4-celled, 4-valved, inferior; seeds naked, affixed to a 4 cornered central receptacle.

GAURA. Cal. 4-cleft, tubular: petals 4, ascending towards the upper side: nect. inferior, 1-seeded.

EPILOBIUM. Cal. 4-cleft, tubular: petals 4: caps. oblong inferior: seeds comose.

FUCHSIA. Cal. funnel-shaped, colored, deciduous: petals 4, in the throat of calyx, alternate with its segments: nectary an 8-furrowed gland: stigma capitate: berry oblong, obtuse, 4-cornered, 4-celled. E.

CLARKIA. Cal. 4-cleft, tubular: corol 4-petalled, 3 lobed-crossform, with claws: stamens 4, with roundish anthers, imperfect: stigma petal-like, 4-lobed: capsule 4-celled. (False tree primrose.) S.

OXYCOCCUS. Cal. 4-cleft: cor. 4-parted, with linear revolute segments: filaments conniving: anthers tubular, 2-parted: berry many-seeded.

DAPHNE. Cal. 4-cleft, like a corolla, withering, including the stamens: drupe 1-seeded. E.

ORDER II. DIGYNIA.

8 Stamens. 2 Styles.

CHRYSOSPLENIUM. Calyx superior, 4 or 5-cleft, colored: corol 0: capsule 2-beaked, 1-celled, many-seeded. The terminal flowers in the European specimens are decandrous, but the plant is always octandrous in America.

ORDER III. TRIGYNIA.

8 Stamens. 3 Styles.

POLYGONUM. Cal. 0: cor. 5-parted, like a calyx: seed 1, angular, covered: (stamens and styles uncertain in number.)

BRUNICHIA. Calyx tubular, inflated, 5-cleft; angular at the base, and decurrent into the dilated peduncle, becoming coriaceous: cor. none: styles short: stigmas 2-cleft: pericarp lobed: seed 1, 3-sided: stamens vary from 8 to 10. S.

CARDIOSPERMUM. Sepals 4; petals 4: nect. 4-leaved unequal: caps. 3, connate, inflated. S.

SAPINDUS. Sepals 4: petals 4: caps. fleshy, connate, ventricose. S.

ORDER IV. TETRAGYNIA.

8 *Stamens.* 4 *Styles.*

ADOXA. Cal. 2 or 3-cleft, inferior: cor. 4 or 5-cleft, superior: berry 1-celled, 4 or 5-seeded, united with the calyx. S.

CLASS IX. ENNEANDRIA.

9 *Stamens.*

One of the smallest of the Linnean classes; containing, however, three important genera; the Laurel, famous for the valuable spices it produces, and for the beautiful foliage of its insipid species; the Cashew nut, well known at the tables of the great or luxurious; and the Rhubarb, one of the most valuable of medicines.

The class itself is extremely unnatural, and the assemblage of genera most incongruous.

ORDER I. MONOGYNIA.

9 *Stamens.* 1 *Style.*

LAURUS. Cal. 4 to 6-parted: nect. 3 glands, with 2 bristles surrounding the ovary: anthers opening transversely: valves hinged to the upper side.

ERIOGONUM. Cal. campanulate, 6-cleft: nut 1, 3-cornered, covered by the calyx S.

PLEEA. Cal. none: cor. 6-parted, spreading; segments linear, acute: capsule roundish, 3-angled, 3-celled: partitions obsolete: seeds numerous, minute, sub-terete and caudate, attached to the margin of the valves. S.

ORDER II. TRIGYNIA.

9 *Stamens.* 3 *Styles.*

RHEUM. Cor. 6-cleft, persistent: nut 1, 3-cornered. Rhubarb. E.

CLASS X. DECANDRIA.

10 *Stamens.*

This is the last of the Linnean classes in which the stamens *always* manifestly bear a determined relation to the other parts of the flower. It is composed of portions of a considerable number of natural orders, of which the most important is Leguminosæ, with which the class usually is made to commence. These are of two kinds: those which are papili-

onaceous, and those which have a regular expanded flower. The former are remarkable in their kind for bearing distinct stamens, combined with a papilionaceous corolla.

The second and succeeding orders are chiefly occupied by the most important of the genera of the natural order Caryophylleae.

ORDER I. MONOGYNIA.

10 Stamens. 1 Style.

1. *Leguminosae. Flowers papilionaceous.*

SOPHORA. Cal. 5-toothed. Pod necklace-shaped, not winged, many-seeded.

THERMOPSIS. Cal. oblong, $\frac{1}{2}$ -5-cleft, 2-lipped, convex behind: petals of equal length. Standard reflexed at edges: keel obtuse, stamens persistent: pod compressed, linear, many-seeded. S.

VIRGILIA. Cal. 5-cleft: petals of equal length; standard not reflexed at edges: stigma beardless: pod compressed, oblong, many-seeded.

POMARIA. Cal. turbinate, 5-parted, caducous: petals 5, with short claws, upper ones concave, short: filaments hirsute below: stigma capitate: legume 1-celled, 2-seeded. S.

BAPTISIA. Cal. half 4 to 5-cleft, 2-lipped: petals of equal length: standard reflexed at edges: stamens deciduous: pod ventricose, stalked, many-seeded.

CERCIS. Cal. 5-toothed: pod compressed with the seed-bearing suture winged: seeds obovate with a straight embryo.

2 *Leguminosae. Flowers nearly regular.*

CASSIA. Calyx 5-leaved: petals 5; the three upper anthers sterile; the three lower ones beaked.

PROSOPIS. Cal. hemispherical, 4-toothed: pod many-seeded. S.

3, *Ovary superior. Stamens united in a tube. Flowers complete.*

MELIA. Cal. 5-toothed: petals 5: drupe with a 5-celled nut. S.

SWIETENIA. Cal. 5-cleft; petals 5: capsule 5-celled, woody, opening at the base: seeds imbricated, winged. S.

4. *Ovary superior. Stamens separate. Flowers complete.*

TRIBULUS. Cal. 5-parted: petals 5, spreading: style 0: caps. 5, gibbous, spiny, many-seeded. E.

RUTA. Cal. 5-parted: petals concave: recept. surrounded by 10 honey spots: caps. lobed. E.

MONOTROP. Cal. like a corolla, gibbous at the base: capsule 5-celled, many-seeded. Sub-genus, *HYPOPITHUS*, has bearded stigma.

PTEROSPORA. Corol 5-parted: nectary ovate, with a 5-toothed reflexed margin, enclosing the stamens: anthers 2-celled, 2-bristled, sub-peltate: filaments flat: style short: stigma capitate: capsule sub-globose, 5-celled. The nectary is considered as a corol, and the corol as a calyx by some: but these three genera should be united in one, by altering two or three words in the definition. Herbage not green.

MONOTROPSIS. Corol 5-leaved, withering, ovate-accuminate, close-

pressed to the nectary: nectary bell-form, fleshy limbs; with 5 ovate acute divisions: anthers clavate bag-like: germs 4 or 5-sided: stigma subglobose. Herbage not green. S.

DIONÆA. Cal. 5-leaved: petals 5: capsule 1-celled, gibbous, many-seeded. S.

KALMIA. Cal. 5-parted: cor. salverform, with a limb having 5 horns beneath: caps. 5-celled.

LEDUM. Cal. 5-cleft: cor. flat, 5-toothed: caps. 5-celled, bursting at base: anthers opening by 2 terminal pores.

RHODORA. Cal. 5-toothed: petals 3: stamens declinate: caps. 5-celled.

RHODODENDRON. Cal. 5-parted: cor. somewhat funnel-shaped: stamens declinate: caps. 5-celled.

EPIGAEA. Outer calyx 3-leaved, inner 5-parted, cor. salver-shaped: caps. 5-celled.

ANDROMEDA. Cal. 5-parted: cor. ovate with a 5-cleft orifice: caps. 5-celled: valves contrary to the dissepiment.

GAULTHERIA. Outer calyx 2-leaved; inner 5-cleft, ovate: nect. with 10 points: caps. 5-celled, clothed with an inner berried calyx.

ARBUTUS. Cal. 5-parted: cor. ovate, with a 5-cleft orifice, pellucid at the base: berry 5-celled.

CLETHRA. Cal. 5-parted: petals 5: stigma 3-fid: caps. 3-celled: 3-valved.

MYLOCARTUM. Cal. 5-toothed: petals 5: stigma capitate, 3-cornered, sessile: caps. 3 or 4-winged, 3-celled. S.

PYROLA. Cal. 5-parted: petals 5: capsule 5-celled, opening at the angles.

CHIMAPHILA. Cal. 5-parted: petals 5: stigma sessile, thick, orbicular, sunk in the ovary: anthers beaked, opening by a 2-valved cleft: caps. 5-celled, opening at the angles.

LEIOPHYLLUM. Calyx 5-parted: cor. flat, 5-parted or 5-petalled: stamens longer than the corol, with lateral anthers opening longitudinally on their insides: caps. 5-celled, dehiscent at the top, 5-valved: valves ovate with margins inflexed, remote, straight: columella sub-ovate, terete, rugose: seeds small, not winged, (leaves always glabrous.)

Ovary inferior. Flowers complete.

VACCINIUM. Cor. ulceolate or campanulate. 4 or 5 cleft, with reflexed segments: filaments inserted on the ovary. Berry 4 or 5-celled, many-seeded. Foreign species octandrous.

JUSSIAEA. Cal. 4 or 5-parted: petals 4 or 5: caps. 4 or 5-celled, oblong, opening at the angles: seeds numerous, minute. S.

ORDER II. DYGYNIA.

10 Stamens. 2 Styles.

SCLERANTHUS. Cal. 1-leaved: cor. 0: seeds 2, included in calyx.

HYDRANGÆA. Cal. superior, 5-toothed: petals 5: caps. 2-celled, 2-beaked, opening by a hole between the beaks.

SAXIFRAGA. Cal. 5-parted: petals 5: caps. 2-beaked, 1-celled, many-seeded.

TIARELLA. Cal. 5-parted: petals 5, inserted in the calyx, entire: caps. 1-celled, 2-valved, one valve largest.

MITELLA. Cal. 5-cleft: petals 5, inserted in calyx, pinnatifid; caps. 1-celled, 2-valved, with equal valves.

SAPONARIA. Cal. 1-leaved, naked: petals 5, clawed: caps. 1-celled, oblong.

DIANTHUS. Cal. cylindrical, 1-leaved, with scales at the base: petals 5, clawed: capsule cylindrical, 1-celled.

ORDER III. TRIGYNIA.

10 *Stamens.* 3 *Styles.*

CUCUBALUS. Cal. 1-leaved, inflated: petals 5, clawed: berry superior, 1-celled, many-seeded.

SILENE. Cal. 1-leaved, ventricose: petals 5, clawed: caps. $\frac{1}{2}$ 3-celled, opening at end, many-seeded.

STELLARIA. Cal. 5-leaved, spreading: petals 5, 2-parted: caps. 1-celled, many-seeded.

ARENARIA. Cal. 5-leaved, spreading: petals 5, entire: cap. 1-celled, many-seeded.

HORTENSIA. Flowers deformed; florets solitary: calyx 5-toothed, minute: corol 5-petalled. The gay flowers composing the cyme have a large, colored, permanent, petal-like, 5-leaved calyx, and a minute caducous, 4 or 5-petalled corol: stamens, 8, 10 or 11. E.

MICROPETALUM. Cal. 5-leaved, expanding: petals 5, minute, entire, often wanting: stigmas 4, sessile: caps. ovate, longer than the calyx: 4-valved. (Blind starwort.)

SEDUM. Cal. 5-cleft: petals 5: five honey-scales at base of ovary: capsules 5.

PENTHORUM. Cal. 5-cleft: petals 0 to 5: caps. 5-pointed, 5-celled.

OXALIS. Sepals 5, distinct, or united at the base, the five outer shortest: styles 5, pencil-shaped, or capitate at end: capsule oblong or cylindrical.

AGROSTEMMA. Cal. 1-leaved, coriaceous: pet. 5, clawed: limb obtuse, undivided: caps. 1-celled.

LYCHNIS. Cal. 1-leaved, oblong, smooth: petals 5, clawed, with a nearly 2-fid limb: capsule 5-celled. E.

CERASTIUM. Sepals 5: petals bifid: capsule 1-celled, opening at end.

SPERGULA. Sepals 5: petals 5, entire: capsule ovate, 1-celled, 5-valved.

ORDER X. DECAGYNIA.

10 *Stamens.* 5 *Styles.*

PHYTOLACCA. Sepals 5; berry superior; 10-celled, 10-seeded.

CLASS XI. ICOSANDRIA.

Stamens many; perigynous, or inserted into the calyx.

To gardeners, this is one of the most interesting of the Linnean classes; containing a greater proportion than any other, of objects which come within their observation and management. It also consists of genera for the most part naturally allied; and comprises not only the most remarkable portion of Ficoideae, all Cacti, and the chief of the Myrta-

ceae; but almost every genus of the beautiful and hardy tribes of Rosaceae. Its characters are well defined, and depend upon the insertion of a number of distinct stamens, into the inner surface of the calyx; modifications of which organ are here found to be of more than ordinary importance in characterising the genera. The genera are extremely natural, and have all been studied with unusual attention.

But if it is difficult to ascertain the definite limits of the genera of Icosandria, it is yet more perplexing to arrive at a satisfactory conclusion respecting the species of which the genera are constituted. Having all been, as long as gardens have existed, the objects of cultivation, it has happened that many individuals have, under the action of domestication, wandered so far from their original types, as to have acquired new characters for themselves, of so peculiar a kind, as to have rendered it impossible at the present day to refer them with certainty to the source from which they originally sprung—The apple is the most remarkable case.

ORDER I. MONOGYNIA.

Many perigynous stamens. 1 Style.

Ovary inferior.

CACTUS. Cal. imbricated: petals numerous, in many rows; the inner the largest: stigma many-cleft: berry many-seeded.

PHILADELPHUS. Cal. 4-5-parted: petals 4-5: style 4-cleft: caps. half-superior, 4-5-celled, many-seeded: seeds with an arillus. S.

MYRTUS. Cal. 5-cleft: petals 5: berry 2 or 3-celled, many-seeded: radicle and cotyledons distinct. E.

PUNICA. Cal. 5-cleft: petals 5: berry many-celled, many-seeded; seeds berried: placentas parietal. E.

MENTZELIA. Calyx 5-cleft, superior, caducous: petals 5: capsule 1-celled, 3-valved, cylindric, 3 to 6-seeded, top flat: seeds oblong, somewhat angular, arranged longitudinally. S.

DECUMARIA. Cal. superior, 8 to 10-cleft: petals 8 to 10: capsule 7 to 9-celled, many-seeded: seeds subulate, minute. S.

CHRYSOBALANUS. Cal. 5-cleft, inferior: petals 5: style lateral: drupe prune-form; nut 5-grooved, 5-valved, 1-seeded. S.

TIGAREA. Cal. inferior, 5-cleft: petals 5: capsule 1-seeded, oblong, acuminate, pubescent, opening longitudinally within. S.

TORREYA. Calyx superior, 5-cleft, permanent: coral 10-petalled: capsule cylindrical, oblong, with a flat summit, 1-celled, 3 to 7-valved, walled up: receptacles 3 to 7 masses, walled: seeds numerous, compressed, arranged in a double horizontal series. S.

Ovary superior.

AMYGDALUS. Cal. 5-cleft: petals 5: drupe with a nut perforated on its surface. E. Peach.

ARMENIACA. Flowers sessile: calyx 5-cleft, inferior: petals, 5: drupe fleshy, pubescent, nut with 1 margin acute, the other obtuse, furrowed both sides. Apricot. E.

PRUNUS. Cal. 6-cleft: petals 5: drupe with a hard smooth nut.

LYTHRUM. Cal. bell-tubular, 6, 8, 10 or 12-toothed, inferior: petals

5 or 6, equal, on the calyx: capsules 2 to 4-celled, many-seeded, covered.

CUPHEA. Cal. tubular, ventricose, 6 to 12-toothed, unequal: petals 6, mostly unequal, inserted on the calyx: capsule 1-celled, dehiscent longitudinally with the calyx, follicle-like, 3-sided: seeds lenticular. (Wax-bush.)

•• ORDER II.—V. DI-PENTAGYNIA.

Many perigynous Stamens. 2 to 5 Styles.

Ovary inferior.

AGRIMONIA. Cal. 5-cleft, inferior, or 5-toothed, invested with an outer lobed one: petals 5: stamens 12: seeds 2, in the bottom of the calyx. (Agrimony.)

SORBUS. Cal. 5-cleft, superior: petals 5: styles 2 to 3: berry pomaceous or farinaceous: seeds 2 or 3, cartilaginous. (Mountain ash.)

MESPILUS. Cal. 5-parted, with leafy divisions: disk large, honey-bearing: styles smooth: apple turbinate, open, 5-celled, with a bony putamen. E.

CRATAEGUS. Cal. 5-toothed: petals spreading, orbicular: ovary 2-5-celled: styles smooth: apple fleshy, oblong, closed by the teeth of the cal. or by the thickened disk: putamen bony.

PYRUS. Cal. 5-toothed: petals roundish: apple closed, 5-celled, with a cartilaginous putamen: cells 2-seeded. Testa cartilaginous.

ARONIA. Cal. 5-toothed: seed cartilaginous.

FOTHERGILLA. Cal. inferior, truncate, obsoletely crenate: cor. 0: germ 2-cleft: styles 2: capsule 2-lobed, 2-celled: seeds solitary, bony.

Ovary superior.

SPIRAEA. Cal. spreading, 5-cleft: petals 5: caps. 1-celled, 2-valved, opening inwards; 1-3-seeded.

GILLENIA. Cal. infundibuliform, 5-toothed: petals 5: stamens very short: capsule 5-celled.

SESUVIUM. Cal. 5-parted, colored: petals 0: caps. ovate, 3-celled, cut round, many-seeded.

ORDER XIII. POLYGYNIA.

Stamens many, perigynous. Styles many.

MESEMBRYANTHEMUM. Cal. 5-cleft: petals many, linear: capsule turbinate, fleshy, inferior, many-seeded. E.

ROSA. Cal. urceolate, 5-cleft, fleshy, contracted at orifice: petals 5: grain bony, hairy, included in the fleshy tube of calyx.

RUBUS. Cal. 5-cleft: petals 5: berry composed of many cohering fleshy grains: receptacle nearly dry.

DALIBARDA. Cal. 5-cleft: petals 5: berry dry: styles 5, long, deciduous.

FRAGARIA. Cal. 10-cleft: pet. 5: grains inserted upon a fleshy deciduous receptacle.

COMARUM. Cal. 10-cleft: petals 5; less than calyx: receptacle ovate, spongy, persistent.

POTENTILLA. Cal. 10-cleft: pct. 5: grains rugose, roundish, naked, fixed to a small dry receptacle.

GEUM. Cal. 10-cleft: sepals unequal: petals 5: grains generally with a jointed awn.

BOOTIA. Cal. with 5 pit-like nectaries, opposite its lanceolate divisions.

CALYCANTHUS. Stamens unequal, deciduous; the 12 outer fertile: grains many.

DRYAS. Cal. simple, 8-cleft: petals 8: grains with a hairy tail.

CLASS XII. POLYANDRIA.

Stamens many, hypogynous, or inserted under the ovary.

This class has an indefinite number of stamens, which neither cohere in any part of their length, nor are distributed in distinct parcels; but it is distinguished by the stamens being inserted distinctly from the floral envelopes, immediately under the ovary, into what has been called the receptacle by Linnaeus and his followers; torus, by Mr. Salisbury; and thalamus, by some other botanists. The class consists of greater part of several extensive natural orders, such as Ranunculaceae, Magnoliaceae, Cistineae, &c., and is replete with subjects of interest to gardeners and florists. The brilliant varieties of the ranunculus and anemone constitute the most attractive part of the flower garden. Paeonia, well known for the richness of its coloring, and the robustness of its constitution, is the ornament of every cottage; and the noble varieties of Magnolia, the pride of North American forests, are the finest plants of the shrubbery. Nymphaea and Nelumbium are beautiful genera of aquatic plants.

ORDER I. MONGYNIA.

Stamens many, hypogynous. Style 1.

ACTAEA. Cal. 4-leaved, deciduous: petals 4: berry 1-celled: seeds half-orbicular.

SANGUINARIA. Cal. 2 leaved: petals 8: pod ovate, 1-celled.

PODOPHYLLUM. Cal. 3-leaved: petals 9: berry 1-celled, crowned with the stigma.

CHELIDONIUM. Cal. 2-leaved: petals 4: pod 1-celled, linear; dissepiment 0: seeds several, crested.

GLAUCIUM. Cal. 2-leaved: petals 4: pod 2-celled, linear, 2-3-valved: seeds several, dotted.

PAPAYER. Cal. 2-leaved: petals 4: capsule 1-celled, opening by pores under the persistent stigma.

MECONOPSIS. Petals 4; styles short: stigma 4-6, radiating, convex, distinct: capsule opening with 4-6-valves.

ARGEMONE. Cal. 3-leaved: petals 6: capsule half-valved.

SARRACENIA. Cal. double, 3-5-leaved: petals 5: caps. 5-celled: style with a clypeate stigma.

NYMPHAEA. Sepals at the base of the discus: petals and stamens connected with the whole of the discus, which covers the carpella.

MACROTIS. Cal. about 4-leaved, becoming colored before expanding, caducous: corol many minute petals, very caducous, or wanting: stigma simple, sessile, curving towards the gibbous side of the germ: capsule 2-valved, dehiscient at its strait suture

THEA. Cal. 5 or 6-leaved: corol 6 to 9-petalled: capsule 3-seeded. E.

CITRUS. Cal. 5-cleft: petals 5, oblong: filaments dilated at the base, in several parcels: berry 9 to 18-celled. Polyadelphous. E.

BEJARIA. **BEFARIA.** Cal. 7-cleft: petals 7: stamens 14: capsule 7-celled, many seeded. S.

LEWISIA. Cal. 7 to 9-leaved: petals 14 to 18: stamens 14 to 18: style about 3-cleft, stigma 2-cleft: capsule 3-celled, many-seeded; seeds shining. S.

NUPHAR. Sepals, petals and stamens, inserted at the base of the discus.

TILIA. Cal. 5-parted: petals 5; capsule coriaceous, globose, 5-celled, 4-valved, opening at base, 1-seeded.

CISTUS. Cal. 5-leaved, with two small leaflets: petals 5: caps. 5-celled; the valves bearing the dissepiments in the middle.

HUDSONIA. Cal. tubular, inferior, unequally 5-parted: two of the divisions obsolete, colored: 5-petalled: stamens 15 to 30; capsule 1-celled, 3-valved, 1 to 3-seeded.

PORTULACCA. Cal. 2-cleft, inferior; corol 5-petalled: capsule 1-celled, opening transversely: columella 5. filiform.

TALINUM. Cal. inferior, 2 or 5-leaved: corol 5-petalled; capsule 1-celled, 3-valved, many-seeded; seeds arillate: columella globose.

ORDER II—IV. DI-TETRAGYNIA.

Stamens many, hypogynous. Styles. 2-4.

PAEONIA. Cal. 5-leaved: petals 5: styles 0: caps. many-seeded, like a pod. E.

DELPHINIUM. Cal. 0: petals 5: nectary bifid; cornute behind: siliques 3-1. S.

ACONITUM. Cal. 0: petals 5; the upper vaulted: nectaries 2, hooded, stalked, recurved: siliques 3-5. S.

NIGELLA. Cal. 0: petals 5: nectaries 5: 3-cleft, within the corol: capsules 5, convex. E.

RHIZOPHORA. Cal. 4-parted: cor. 4-parted: stigmas 2: seed 1, very long, fleshy at the base.

RESEDA. Involucre many-leaved, spreading: perfect flower central, apetalous, surrounded by several fringed petaloid barren flowers.

CALLIGONUM. Cal. 5-parted: cor. 0: filaments about 16, united at base: ovary superior, 4-cornered; styles 4: nut with a many-winged crest, 1-celled. S.

ASCYRUM. Cal. 4-leaved; 2 interior leaflets cordate, larger: corol 4-petalled: stamens with the filaments disposed in four parcels: styles 1 to 3: capsule oblong, 1-celled, 2-valved, included in the calyx leaves.

HYPERICUM. Cal. 5-parted, divisions equal, subovate: corol 5-petalled: filaments often united at the base in 3 or 5 sets: styles 2 to 5: capsule membranous, roundish, with a number of cells equal to the number of styles: the bases of the filaments are often in groups when they are not united.

ORDER V. PENTAGYNIA.

Stamens many, hypogynous. Styles 5.

CIMICIFUGA. Cal. 4-leaved: cor. with four urceolate nectaries: caps. 4: seeds sealy.

AQUILEGIA. Cal. 0: petals 5: nectaries 5; horned between the petals: caps. 5, distinct.

ORDER XIII. POLYGYNIA.

Styles many. Stamens many, hypogynous.

NELUMBium. Cal. 4-5-leaved: petals many: fruit turbinate, in a truncate discus, with several 1-seeded hollows: nuts ovate, crowned with the persistent style, and in the broad end of the fruit.

ILLICium. Cal. 6-leaved: petals 2-7: caps. many, placed in a circle; 2-valved, 1-seeded. S.

LIRODENDRON. Cal. 3-leaved: petals 6: samarae imbricated in a cone: caps. 1-2-seeded, not opening, attenuated.

MAGNOLIA. Cal. 5-leaved: petals 6-9: caps. 2-valved, 1-seeded, imbricated in a cone: seeds pendulous.

ANNOA. Sepals 3, united at the base; concave, cordate, acute: petals 6, thick; the interior thicker or none: anthers sub-sessile, with a dilated angular end: berry pulpy, many-celled towards the outside. S.

PORCELIA. ASIMINA. Cal. 3-leaved or 3-parted: petals 6, spreading, oblong-ovate; the inner ones smoothest: anthers subsessile: stigmas sessile, obtuse: berries several, sessile, ovate, obtuse, many-seeded: seed arilled.

HEPATICA. Invol. 3-leaved, 1-flowered, resembling a calyx, entire: sepals petaloid, 6-9, arranged in 2 or 3 rows: ovaries many: grains without an awn.

ANEMONE. Invol. 3-leaved, distant from the flower, cut: sepals 5-15, petaloid: petals 0.

CLEMATIS. Invol. 0, or like a calyx under the flower: sepals 4-8, colored: petals 0, or shorter than the sepals: grains terminating in a feathery awn.

ATRAGENE. CLEMATIS. Cor. double, many-petaled; outer ones largest, inner ones neetary-like, spatulate: seeds with pilose or plumose tails: (or petals 4-to 6, with spatulate neetaries alternating with the petals; and the outer filaments dilated.)

THALICTRUM. Invol. 0: petal 0: grains dry, not awned, sometimes stalked, sometimes with a longitudinal furrow.

ADONIS. Sepals 5, appressed: petal 5-15, with a naked claw: grains many, 1-seeded, spiked, ovate, pointed with the persistent hardened style. E.

SEMPERVIVUM. Cal. 9 to 12-parted: petals 8 to 12: capsules 12, many-seeded; (stamens 16 or 20.) E.

RANUNCULUS. Sepals 5, not deciduous: petals 5, rarely 10, with a honey-scale at base: grains pointed.

TROLLIUS. Sepals colored, 5-10-15, deciduous, petaloid: capsules many, subcylindrical, many-seeded.

HELLEBORUS. Sepals 5, persistent, roundish, obtuse, large, usually green: petals 8-10, tubular, neetariferous: stigmas orbicular: capsules coriaceous. E.

CORTIS. Sepals 5-6, colored, petaloid, deciduous: petals small, cucullate: stamens 20-25: caps. 6-10, on long stalks, membranous, 4-6-seeded.

CALTHA. Sepals 5, colored, round; petals 0: stamens many: capsule spreading, 1-celled, many-seeded.

HYDROPELTIS. Sepals 3-4; petals 3-4: ovaries 6-18: seeds in a pendulous ovate globose capsule.

HYDRASTIS. Sepals 3, ovate: petals 0: cariopsides berried, many in a head, terminated by the style, 1-celled, 1-2-seeded.

CLASS XIII. DIDYNAMIA.

4 *Stamens, of which two are shorter than the others.*

This class, which, as its name applies, depends upon the presence of four stamens in the corolla, two of them being longer than the others, is, with the exception of syngenesia and Gynandria, the most natural and best defined of all Linnaeus's great groups; or as he named them, classes. It is divided into two orders, called Gymnospermia and Angiospermia.

Gymnospermia contains all the genera with what are popularly but erroneously called by the Linnaean school of botany, naked seeds. It answers to the natural order of labiatae of Jussieu's method, with the exception of some genera which are excluded on account of having only two stamens, and are found in diandria. Nearly all the class consists of herbaceous plants, those which are called shrubs being for the most part herbaceous plants, whose stems, from the mildness of the climate in which they grow, become perennial. In Angiospermia are included the genera with numerous, or rarely a few, seeds inclosed in a simple pericarpium. These would be combined in a manner not altogether unnatural, if some of the genera were excluded. For instance, the beautiful Linnaea, the emblem of the most highly gifted naturalist the world has ever produced, belongs to Caprifoliaceae, and stands alone in point of natural affinity.

ORDER I. GYMnosPERMIA.

1. *Pericarpum divided into four lobes resembling naked seeds.*

AJUGA. Upper lip of cor. very minute, 2 toothed: stamens longer than upper lip. S.

SYNANDRA. Cal. 4-cleft; segments unequal, subulate, inclined to one side: upper lip of the corol entire and vaulted; lower one unequally 3-lobed; throat inflated, naked: upper pair of anthers cohering, with the adjoining cells empty; filaments downy. S.

TEUCRIUM. Upper lip of cor. none, 2-parted beyond the base; stamens exserted.

SATUREJA. Cal. tubular, striated: segments of corolla nearly equal: stamens distant. E.

HYSSOPUS. Lower lip of cor. 3-parted, with the intermediate segm. subcrenate: stamens straight, distant.

NEPETA. Cal. dry, striated: cor. with a longish tube; the middle segments of lower lip crenate; side of mouth reflexed; stamens connive.

LAVANDULA. Cal. ovate, somewhat toothed, supported by a bractea. corolla resupinate: stamens within the tube. E.

MENTHA. Cor. nearly equal, 4-fid, with the broadest segment emarginate: stamens erect, distant.

ISANTHUS. Cal. somewhat bell-form: corol 5-parted; tube strait, narrow; divisions ovate, equal: stamens nearly equal: stigma linear, recurved.

HYPTIS. Cal. 5-toothed, increasing in size: corolla ringent: the upper lip bifid; the lower 3-parted, with the intermediate segments shaped like a little bag: stamens inserted in the swollen part of the tube, and declinate. S.

GLECHOMA. Cal. 5-fid: each pair of anthers forming by their union the figure of a cross.

LAMIUM. Upper lip of corolla entire, vaulted; lower 2-lobed; the orifice toothed at the edge on both sides.

GALEOPSIS. Upper lip of corolla somewhat crenate, vaulted; lower 2-toothed above.

STACHYS. Upper lip of cor. vaulted; lower reflexed at edges, intermediate larger and emarginate: stamens after flowering reflexed towards the sides.

BALLOTA. Cal. salver-form, 5-toothed, 10-lined; upper lip of cor. crenate, concave; grains ovate, 3-cornered. E.

MARRUBIUM. Cal. salver-form, rigid, 10-lined: upper lip of cor. bifid, linear, straight.

LEONURUS. Cal. 5-angled, 5-toothed: upper lip of cor. villous, flat, entire; lower 3-parted with the middle segment undivided: anthers covered with shining spots. E.

VERBENA. Cal. with one of the teeth truncate; cor. funnel-form, with a curved tube; border 5-cleft, nearly equal: seeds 2 or 4 with an extra vanishing tegument: sometimes 2 stamens are barren.

LEUCAS. Cal. tubular, 10-striated, 8-10-toothed, with an orifice, either equal or oblique: corolla ringent; helmet concave, entire, bearded; lower lip 3-fid, with the middle segment largest: anthers twin, beardless, with divaricating lobes: stigma 2-lipped, with the upper segment very short. S.

MOLUCELLA. Cal. campanulate, enlarged, wider than corolla, spiny. E.

CLINOPODIUM. Invol. of many bristles beneath the whorl: corolla 2-lipped; upper lip of corolla flat, obovate, straight.

HEDEOMA. Cal. 2-lipped gibbose, at the base; upper lip with 3 lanceolate teeth; lower lip with 2 subulate ones: corol ringent: 2 short stamens barren.

CUNILA. Cal. cylindric, 10-striate, 5-toothed, throat villose: corol ringent: upper lip erect, flat, emarginate: 2 of the stamens usually barren and very short; the other two exsert: stigma unequally bifid.

PYCNANTHEMUM. Involucre of many bractes beneath the little heads: cal. tubular, striated: upper lip of corolla nearly entire; lower trifid: stamens nearly equal.

ORIGANUM. Cone 4-cornered, spiked, collecting the calyxes; upper lip of corolla erect, flat; lower 3-parted, with nearly equal segments.

THYMUS. Orifice of bilabiate calyx closed with hairs: upper limb of corolla flat, emarginate. E.

CALAMINTHA. Cal. after flowering closed by hairs: orifice of cor. in

flated; upper lip emarginate; lower 3-parted with the intermediate segments entire, sub-emarginate or crenulate. S.

MELISSA. Cal. dry, flattish above, with the upper lip somewhat fastigiate: upper lip of cor. somewhat vaulted, 2-fid; lower less, with middle lobe cordate. E.

DRACOCEPHALUM. Cor. inflated at orifice, with the upper lip concave.

OCYMUM. Cal. with the upper lip orbicular; lower 4-fid: corolla resupinate, with one lip 4-cleft, the other undivided: exterior filaments having a process at their base. E.

TRICHOSTEMA. Upper lip of cor. falcate: stamens very long.

SCUTELLARIA. Cal. entire, after flowering closed with a fid: tube of the corolla elongated.

PRUNELLA. Upper lip of calyx dilated: filaments forked, upon one point bearing their anthers: stigma bifid.

PHRYMA. Cal. 2 lipped, 5-toothed: grain only one.

MACBRIDEA. Cal. top-form, 3-cleft, 2 segments large: corol 2-lipped; the upper entire, the under 3-parted: anthers 2-lobed; the lobes spreading, fringed with small spines. S.

CERANTHERA. Cal. 2-lipped, the upper lip emarginate, the lower one 2-cleft, upper of the corol 2-lobed, the lower one 3-parted: stamens exerted; anthers horizontal, awned at each end. S.

TULLIA. Cal. upper lip 3-toothed, lower one 2-toothed; teeth appendaged: cor. 2-lipped; upper lip very entire, lower one 3-parted, middle division largest. S.

ORDER II. ANGIOSPERMIA.

Seeds several, enclosed in an undivided pericarpium.

Ovary superior, monopetalous.

1. *Filaments 5, the upper only rudimentary.*

BIGNONIA. Cal. 5-fid, cup-shaped; cor. campanulate, 5-fid, ventricose beneath: pod 2-celled; seeds with membranous wings.

SESAMUM. Cal. 5-parted: cor. campanulate, 5-fid, with the lower lobe largest: stigma lanceolate: capsule 2-celled, the cells divided in two by the inflexed edges of the valves. S.

PENTSTEMON. Cal. 5-leaved: cor. lipped ventricose: fifth filament longer than the rest, and bearded at its upper end: capsule compressed, 2-celled, 2-valved: seeds numerous, sub-globose.

CHELONE. Cal. 5-parted, with two bracts: cor. ringent, ventricose: fifth filament shorter than the others: caps. 2-celled, 2-valved: seeds numerous, with a membranous edge.

MARTYNIA. Cal. 5-fid: cor. ringent: capsule woody, coated, with a hooked-beak, 4-celled, 2-valved.

Calyx 5-fid.

RUELLIA. Cal. 5-parted, generally with two bracts: corolla campanulate, with a 5-lobed limb: stamens in pairs: capsule narrowed at each end; teeth opening elastically; seeds not many.

2. *Filaments 4. Capsule, drupe, or berry few-seeded. Seeds erect.*

Calyx 4-fid.

LANTANA. Flowers capitate: cal. obsoletely 4-toothed: limb of corolla 4-fid, with an open orifice: stigma hooked backwards: drupes heaped, with a 2-celled smooth nut.

MELAMPYRUM. Capsule 2-celled; seeds 2, gibbose, polished.

SCHWALBEA. Cal. tubular-inflated; upper division small; lower division large, emarginate or 2-toothed: corol ringent, upper lip entire, arched, lower lip 3-lobed: capsule ovate, compressed, 2-celled, 2-valved, with a double partition: seeds many, chaffy.

EUCHROMA. Cal. inflated, 2 or 4-cleft: corol 2-lipped; upper lip long linear, embracing the style and stamens: anthers linear, with unequal lobes, cohering so as to form an oblong disk: capsule ovate, compressed, 2-celled; seeds numerous, surrounded with an inflated membrane.

EUPHRASIA. Cal. cylindric: corol 2-lipped; the upper lip 2-cleft; lower lip 3-lobed, with the divisions 2-cleft: lower anthers lobed, spinose.

ORTHOCARPUS. Cal. tubular, somewhat 4-cleft: corol 2-lipped, closed; upper lip smaller, compressed, margin inflexed; lower lip concave, obsoletely 3-toothed, unexpanded: lobes of the anthers equal: capsule straight, many-seeded. S.

Calyx 5-fid.

ZAPANIA. Flowers capitate: cal. 5-toothed: cor. 6-fid; stigma petate, capitate, oblique: fruit covered, bladdery, enclosed in two seeds.

AVICENNIA. Cal. 5-parted; cor. 2-lipped; the upper lip square: caps. coriaceous, rhomboid, 1-seeded: seed germinating within the capsule.

3. *Filaments 4. Capsule or berry many-seeded. Seeds small, attached to a central receptacle.*

Calyx bifid.

OROBANCHE. Cal. of 2-lobed lateral leaflets: corolla ringent: capsule 1-celled, 2-valved, many-seeded: gland at the base of the ovary.

CASTILLEJA. Cal. spathaceous; the upper lip bifid, lower none: cor. 2-lipped: the lower lip very short, trifid, with 2 glands between the segments: caps. 2-celled.

OBOLARIA. Cal. bract-like: corol 4 cleft, bell-form; capsule 1-celled, 2-valved, many-seeded: stamens from the divisions of the corol nearly equal: stigma 2-cleft or emarginate.

EPIPHEGUS. Polygamous. Calyx abbreviated, 5-toothed: corol of the barren flowers ringent, compressed, 4-cleft; lower lip flat; of the fertile flowers minute, 4-toothed, caducous: capsule truncate, oblique, 1-celled, imperfectly two-valved, opening on one side.

Calyx 4-fid.

RHINANTHUS. Cal. 4-fid, ventricose: cor. ringent, with the upper lip generally compressed: capsule 2-celled, blunt, compressed.

BARTSIA. Cal. 4-lobed, emarginate, colored: cor. smaller than the calyx; the upper lip longest: capsule 2-celled: seeds angular.

Calyx 5-fid.

ANTIRRHINUM. Cal. 5-leaved: cor. not spurred, gibbous at base; the upper lip bifid, reflexed; lower trifold, closed by the prominent palate: caps. oblique at base, without valves, opening at the end by three pores.

GERARDIA. Cal. 5-fid: cor. 2-lipped, the lower lip 3-parted, with emarginate lobes; the middle 2-parted: capsule 3-celled, splitting.

PEDICULARIS. Cal. 5-fid: cor. ringent: capsule 2-celled, mucronate, oblique. seeds truncated. Leaves multifid.

MIMULUS. Cal. prismatical, 5-toothed: cor. ringent, with the upper lip folded back at the sides: stigma thick: capsule 2-celled, many-seeded.

COLLINSIA. Cal. 5-cleft: cor. 2-lipped, throat closed; upper lip 2-cleft; lower one 3-cleft; intermediate segments keeled, bag-like, and covering the declined stamens and style: capsule globose, somewhat 1-celled and 4-valved; seeds 2 or 3, umbilicate.

DIGITALIS. Cal. 5-parted: corolla campanulate, ventricose, 5-fid: capsule ovate, 2-celled. E.

SEROPHULARIA. Cal. 5-fid; cor. subglobose, resupinate: caps. 2-celled.

LIMOSELLA. Cal. 5-fid: cor. 5-fid, equal: stamens approximating in pairs: caps. 1-celled, 2-valved, many-seeded.

SEYMERIA. **AFZELIA.** Calyx 5-parted nearly to the base: corol bell-wheel-form, almost equally 5-lobed: stamens subequal near the throat; anther oblong, naked: style declined: capsule inflated, ovate, acute, 2-celled, 2-valved, opening at the top. S.

HERPESTIS. Cal. 5-parted unequal; 2 inner sepals smaller, covered by the others: cor. tubular, somewhat 2-lipped: stamens included; lobes of anthers spreading: stigma emarginate.

CAPRARIA. Cal. 5-parted: cor. campanulate, 5-fid, acute: caps. 2-valved, 2-celled, many-seeded. S.

BUCHNERA. Cal. absolutely 5-toothed: limb of corolla 5-fid, equal, with cordate lobes: capsule 2-celled.

CLASS XIV. TETRADYNAMIA.

Stamens 6, of which four are longer than the rest.

This class consists entirely of the natural order Cruciferae. The difference between the genera with a long pod, (*Siliculosae*,*) and those with a short one (*siliculosae**) has given rise to two orders in the Linnean system. But these are not only ambiguous, but interfere so much with a distribution of the genera according to their natural affinities, that they have been rejected here, and the divisions of Decandolle's *Prodromus* have been substituted. I have constructed two orders founded on his views, and adopted the names, which he applied to his two principal sections.

The plants of this class have always been celebrated for their antiscorbutic qualities. These seem to reside in an acrid, oily, volatile principle, not yet determined by chemists, and varying in the degree of abundance in which it is found in different species.

* q. after a genus, for *siliquosa*, l. *siliculosae*.

It is particularly abundant in the seeds of mustard and garden rocket, in the roots of the horse radish, and in the foliage of the *Lepidium latifolium*, which administered inwardly, act powerfully upon the gastric organs; or applied externally, inflame the skin and operate nearly as severely as blisters. A slighter degree of acrimony is found in the foliage of the scurvy grass, the roots of the garden radish, &c.; and these, therefore, operate more gently, and perhaps more safely, when eaten; scarcely at all when applied outwardly. Whatever the degree of acrimony may be in these plants, they all appear when eaten, to produce some specific action upon the digestive organs, and thence upon scorbutic humors; for which reason, the horse radish, water-cress, radishes and even cabbages are eminently antiscorbutic. They are also admitted by physicians as diuretic, sialagogue, and diaphoretic. It is only when the acrid principle is diffused over a considerable quantity of fleshy and watery substance, that cruciferous plants become eatable, as in the leaves and stems of cabbages and sea-kail and in the roots of radishes and turnips. Even in these plants the proportion of acrid principle is much diminished by exclusion from light. Plants of this class are also remarkable for containing a larger quantity of nitrogen than most vegetables; for which reason ammonia is generally evolved in their fermentation or putrefaction; to which circumstance it is possible that the two remarkable phenomena are to be attributed, viz.: that cruciferous plants contain a greater portion of nutritive matter than most herbaceous plants; and that they require either a very rich soil, manured with animal substances, or at least a situation near the habitations of men. Nine hundred species are now described, of which not more than twenty-two are to be found in the works of Hippocrates, Theophrastus, Dioscorides, or Pliny.

ORDER I. PLEURORHIZA.*

Seed with the radical on its side. The cotyledons are acuminate, compressed. Seeds often margined.

CHEIRANTHUS. Silique round or compressed: stigma 2-lobed or capitate: calyx bisaccate at base. *q.*

BARBAREA. Silique 4-cornered, 2-edged, the valves not elongated at end: calyx equal at base. *q.*

TURRITIS. Silique linear with flat valves: seeds in two rows in each cell. *q.*

ARABIS. Silique linear with flat valves, 1-nerved in the middle: seeds in one row in each cell. *q.*

CARDAMINE. Silique linear with flat nerveless valves, often opening with elasticity: funicles of the hilum slender. *q.*

DENTARIA. Silique lanceolate with flat nerveless valves, often opening with elasticity: placentas not winged: funicles dilated.

LUNARIA. Silicle pedicellate, elliptical or lanceolate with flat valves: funicles long, adhering to the dissepiment: calyx somewhat bisaccate: petals nearly entire: stamens not toothed. *E. l.*

VESICARIA. Silicle globose, inflated, with hemispherical valves: seeds more than 8: petals entire. *l.*

BRAYA. Silique short, terete, torulose, terminated by the style:

* *Gr. pleura* (side) *riza* (root.)

valves sub-semicylindric: stigma flattish: partitions split in the middle: seeds under six: calyx equal at the base, divisions erect. *q.*

SIREPTANTHUS. Cal. erect, colored: petals dilated, having twisted, channeled claws: glands none: stamens with filaments subulate, and thickened at the base: silique very long, angled, compressed: seeds in one series, flat, margined: cotyledons accumbent. *S. q.*

ALYSSUM. Silicle orbicular or elliptical, with valves flat or convex in centre: seeds 2-4 in each cell: calyx equal at base: petals entire: some the stamens toothed. *l.*

DRABA. Silicle sessile, oval or oblong, with flat or convex valves: seeds many, not edged; calyx equal: petals entire: all the stamens without teeth. *l.*

COCHLEARIA. Silicle sessile, ovate, globose or oblong, with ventricose valves: seeds many, not edged: petals entire: stamens without teeth. *l.*

THYSANOCARPUS. Silicle obovate, plano-convex; broad-winged at both margins; emarginate at the apex; 1-celled, 1-seeded; seed broad, obovate, pendulous. *l.*

THLASPI. Silicle emarginate at end, with navicular valves, winged at back: cells 2, many-seeded. *l.*

IBERIS. Two outer petals largest: silicle compressed, truncate, emarginate, 1-seeded. *E. l.*

CAKILE. Silicle 2 jointed, compressed; the upper joint ensiform: seeds solitary in the cells; upper erect; lower pendulous. *l.*

ORDER II. NOTORHIZA.*

Seed with the radicle not on its side: it is generally on its back: the cotyledons are generally incumbent, and not compressed nor margined.

HEPERIS. Silique roundish, or about 4 cornered: stigmas 2, erect, conniving: calyx bisaccate at base. *q.*

SYMBRIUM. Silique roundish, sessile upon the torus: stigmas 2, somewhat distinct or connate in a head: calyx equal at the base. *q.*

STANLEYA. Cal. very large, 4-sided, cruciform, diverging, colored: petals erect; claws longer than the lamina: stamens nearly equal; glands 4, 2 outside and 2 inside of the corol: silique stiped, 2-celled, 2-valved: seeds oblong, flattish. *q.*

ERYSIMUM. Silique 4-cornered: calyx closed. *q.*

CAMELINA. Silicle obovate or sub-globose, with ventricose valves and many-seeded cells; style filiform. *l.*

LEPIDIUM. Silicle ovate, or sub-cordate, with carinate or rarely ventricose valves, opening with 1-seeded cells. *l.*

ISATIS. Silicle elliptical, flat, 1-celled, 1-seeded, with carinate navicular valves, which are scarcely dehiscent. *E. l.*

CORONOPUS. Silicle reniform, compressed, wrinkled; cells valveless 1-seeded. *S. l.*

MYAGRUM. Silicle sub-erose, valveless; cells fertile and empty, alternately superimposed on each other: styles permanent. *S. l.*

SELENIA. Cal. equal at the base, colored, spreading: silicle large many-seeded, oval, flat-compressed, margined, sub-sessile: valves parallel, smaller than the partition: glands 10, in pairs. *S. l.*

* *Gr. notos* (back) *riza* (root.)

BRASSICA. Silique roundish, style small, short, obtuse: seeds in one row: calyx closed. *E. q.*

SINAPIS. Silique roundish, with nerved valves: style small, short, acute seeds in one row: calyx spreading. *q.*

RAPHANUS. Silique transversely, many-celled, or dividing into several joints. *q.*

BUNIAS. Silicle nucamentaceous, indehiscent, 2-4-celled; cotyledons twisted spirally. *l.*

SUBULARIA. Silicle oval; dissepiment elliptical; valves convex; cells many-seeded: stigma sessile. *l.*

CLASS XV. MONADELPHIA.

This class is distinctly characterized by the filaments being united together in a columnar form throughout the whole or a part of their length; and for the most part consists of plants belonging to the natural orders of Malvaceae and Geraniaceae.

Among them are some plants both of interest and ornament; especially the Hibiscus, the Gossypium, (so important in producing the material of cotton,) the Geranium, Passion-flower, and the common Tamarind.

ORDER III. TRIANDRIA.

Stamens 3.

TAMARINDUS. Petals 3, ascending: 3 filaments longer than the others, and fertile: legumen 1-3-celled, pulpy inside.

SISYRINCHIUM. Spathe 2-leaved: perianth 0: corol superior, 6-cleft or 6-petalled, tubular: style 1; stigma 3-cleft: capsule 3-celled.

ORDER V. PENTANDRIA.

Stamens 5.

PASSIFLORA. Cal. 5-parted, colored: petals 5 or 0, inserted in the calyx: crown of many filiform rays: fruit stalked, fleshy.

ERODIUM. Cal. 5-leaved: petals 5: scales 5: alternate with filaments and honey-glands at the base of the stamens: cocci 5, 1-seeded, awned at the base, of a rostrate receptacle. *E.*

PHILOXERUS. Cal. 5-parted: corol none: stamens united at the base into a small entire cup, shorter than the germ: anthers 1-celled: stigmas 2: bladder-like capsule membranaceous, 1-seeded, valveless. *S.*

ACHYRANTHES. Cal. double, membranaceous, permanent, outer 3-leaved, inner 5-leaved, unequal: stamens standing on the nectary, with segments between them: seed one, covered by the converging calyx. *S.*

OPLOTHECA. Calyx double, outer 2-leaved, scarious, convolute, truncate shorter than the inner—inner 1-leafed, muricate, somewhat 5-cleft, with a dense down: corol none: nectary cylindric, 5-toothed, bearing the stamens: stigma simple, capitate, hairy: bladder-like, capsule 1-seeded, inclosed in the calyx. *S.*

MALACHODENDRON. Cal. with one bract: petals 5 or 6, with crenulate limbs: germ 5-furrowed: styles 5, free at the base: stigmas capitate: capsules 5, united, 1-seeded. *S.*

ORDER VII. HEPTANDRIA.

Stamens 7.

PELARGONIUM. Cal. 5-parted, the upper segment ending in a nectariferous tube running down the peduncle: Cor. 5-petuled, irregular. E.

ORDER VIII. OCTANDRIA.

Stamens 8.

PISTIA. Spathe tubular-hooded, strap-like: corol none; filament lateral; anthers 3 to 8: style 1: capsule 1-celled, many-seeded. S.

ORDER V. DECANDRIA.

Stamens 10.

GERANIUM. Cal. 5-leaved; petals 5, regular: glands 5, honey-bearing, united to the base of the longer filaments: cocci 5, 1-seeded, awned at the base, of a beaked receptacle.

ACACIA. MIMOSA. Polygamous: calyx tubular, 5-toothed: petals 5: stamens 5 to 10, exsert: pod 1-celled, 2-valved. S.

DARLINGTONIA. Calyx bell-form, 5 to 7-toothed: petals 5: stamens 5 to 10, somewhat exsert; anthers oblong: germ sessile, acuminate: pod falcate, many-seeded. S.

SCHRANKIA. MIMOSA. Polygamous: calyx tubular, 5-toothed: petals 5: stamens 8 to 10, exsert: pod 4-valved. S.

ORDER XIII. POLYANDRIA.

Stamens indefinite in number.

MALOPE. Cal. double, outer 3-leaved: capsules heaped without order: 1-seeded. S.

MALVA. Cal. double, outer 3-leaved: capsules many, 1-seeded.

ALTHEA. Cal. double, outer 6-9-fid: capsules many, 1-seeded.

LAVATERA. Cal. double, outer 3-fid: capsules many, 1-seeded. E.

HIBISCUS. Cal. double, outer many-leaved: stigmas 5: capsule 5-celled, many-seeded.

GOSSYPIMUM. Cal. double, outer 3-fid: caps. 5 celled: seeds enwrapped in wool. E.

SIDA. Cal. simple, angular: style many-parted: capsules several, 1 or three-seeded.

GORDONIA. Cal. simple: style 5-cornered, with a 5-fid stigma: caps. 5-celled: seeds twin, with a leafy wing. S.

STUARTIA. Cal. simple, rotate: petals 5, styles 5: united or distinct: caps. 5-celled, 5-valved; seeds solitary or twin. S.

HOPEA. Cal. 5-cleft, superior: petals 5: stamens numerous, united in 5 groups: style 1: drupe 3-celled, with 2 of them empty. S.

NUTTALLIA. CALLIRHOE. Cal. simple, 5-cleft: capsules numerous, 1-seeded, united in a ring. S.

STYRAX. Cal. bell-form, generally 5-toothed, inferior: corol 5 to 7-parted, on the calyx: drupe coriaceous, with 1 or 2 1-seeded nuts: stamens 6 to 16, on the throat of the corol, united at the base: anthers oblong, linear. S.

HALESIA. Cal. 4-toothed, superior: corol 4-cleft: nut covered with bark, 4-sided, 2 or all the angles winged: 2 to 4-seeded. S.

CLASS XVI. DIADELPHIA.

Stamens united in two separate parcels.

This class essentially requires, as its name implies, that the stamens should be united in two separate parcels. These may either be equal, each bearing more anthers than one, as in *Fumaria*, and *Corydalis*: or unequal, one parcel being reduced to a single stamen, and the other bearing several anthers, as in the greater number of genera included in the class. But besides the plants whose stamens are thus disposed, it has been the practice to admit other genera having papilionaceous flowers, but with their stamens united in one parcel only; such as *Lupinus*. The propriety of this measure is extremely questionable. It has been before remarked in this work, that the value of an artificial arrangement of objects depends wholly upon the precision with which they are referred to those heads or divisions with the characters of which they agree.

The structure of the corolla of plants of this class is, for the most part, with the exception of *Corydalis*, and what has been popularly termed papilionaceous; that is to say, it consists of five petals of different forms and direction, of which the upper, called the vexillum or standard, is larger than the rest, upon which it is incumbent; the two lateral called the alae or wings, are oblong, distinct, and parallel with the ovarium; and the two lower, called the carina or keel, are enclosed within the alae, are also parallel with the ovarium, and cohere by their lower edges, so as together to form, as it were, one boat-shaped petal. To this common form of corolla there are, however, some exceptions, as in *Amorpha*, where the alae and carina are absent, and in *Erythrina*, where the alae are in some cases almost obliterated. In *Trifolium* the petals all cohere by their claws into an undivided tube.

With regard to the importance of diadelphous plants as applicable to the purposes of mankind, they may be said to hold the very highest rank. All the numerous varieties of pulse, whether eaten by men or cattle, peas, beans, haricots, caravances, lentils, and others, are all produced by Diadelphous plants. The best of our artificial grasses, such as clover, nonesuch, cow-grass, lucerne, saintfoin, serradilla, &c. belong to various Diadelphous genera. A large proportion of the class also consists of useful and ornamental trees and herbs, which will be noticed in their respective places.

ORDER VI. HEXANDRIA.

Stamens 6.

CORYDALIS. Pet. 4, 1 or 2-spurred at base: pod 2-valved, compressed, many-seeded: filaments membranous, or united.

FUMARIA. One petal gibbous or spurred at base: cariopsis indehiscent, 1-seeded, not pointed with a style.

ORDER VIII. OCTANDRIA.

Stamens 8.

POLYGALA. Cal. of 5 leaves, 2 of them wing-shaped and colored: caps. compressed, obcordate.

PETALOSTEMON. Petals 5, nearly equal; 4 of them alternating with the stamens, and uniting with them in a cleft tube: begume 1-seeded, included in the calyx.

ORDER X. DECANDRIA.

Stamens 10.

ERYTHRINA. Cal. bilabiate: vexillum very long, lanceolate: legume torulose. S.

CROTALARIA. Legume turgid, inflated, stalked: filaments with a dorsal fissure.

SPARTIUM. Stigma longitudinal, villous above: filaments adhering to ovary: cal. lengthened at the base. E.

GENISTA. Cal. 2-lipped: upper one with 2, lower one with 3 teeth: vexillum bent backwards from the rest of the flower.

ULEX. Cal. of 2 leaves, with a small scale at the base on each side: legume turgid; scarcely longer than the calyx. S.

ARACHIS. Cal. 2-lipped: cor. resupinate: filament united: legume gibbous, torulose, veiny, coriaceous. E.

LUPINUS. Cal. 2-lipped: anthers 5, oblong: 5-round: legume coriaceous, torulose, compressed.

AMORPHA. Cal. campanulate, 5-fid: vexillum ovate, concave: alae 0: carina 0: legume 2-seeded, falcated.

PHASEOLUS. Stamens 9 connected and 1 separate: legume many-seeded, not articulated: stigma not hairy; cotyledons thick, becoming succulent leaves. Six SUB-GENERA may be made useful to students. 1.

PHASEOLIS. Calyx 2-lipped: keel, stamens, and style twisted: legume compressed. 2. **STROPHOSTYLES.** Same, with legume terete. 3. **AMPHICARPA.** Calyx 4-toothed: style filiform with capitate stigma. 4.

RHYNCOSSIA. Calyx 5-cleft: legume 2-seeded. 5. **WISTARIA.** Calyx sub-2-lipped: keel bicuspidate. 6. **APIOS.** Calyx with 4 obsolete teeth; which with the keel bend back the banner.

DOLICHOS. Vexillum with two calli at base, parallel, oblong, compressing the wings beneath. S.

VEXILLARIA. Cor. resupinate, with a large spreading vexillum overshadowing the wings.

OROBUS. Style linear, cylindrical, downy above: cal. obtuse at the base; its upper segments deeper and shorter. S.

LATHYRUS. Style plane, downy above, broader upwards: cal. with its two upper segments shortest.

PISUM. Style triangular, keeled above, downy: two vpper segments of calyx shorter than the rest.

VICIA. Style bearded beneath the stigma.

ERVUM. Stigma capitate, hairy all over on the outside.

CICER. Cal. 5-parted, length of cor.; four upper segments incumbent on the vexillum: legume turgid, 2-seeded. E.

ROBINIA. Cal. 4-fid: upper segment 2-parted: legume gibbous, long: leaves unequally pinnate.

COLUTEA. Cal. 5-toothed: vexillum with two callosities, unfurled, larger than the blunt carina: stigma lateral under the hooked end of the style, which is longitudinally bearded behind: legume inflated, scarious. E.

- GLYCRRHIZA. Cal. bilabiate, 3-1: legume ovate, compressed. S.
 CORONILLA. Cal. 2-lipped, 2-3: upper teeth connate: vexillum scarcely longer than alae; loment round, jointed, straight. E.
 SESBANIA. Cal. 5-toothed: legume long, (round or linear,) 2-valved, many-celled, with transverse partitions. S.
 ÆSCHYNOMENE. Stamens divided into two equal bundles: legume jointed, straight, exserted: cal. 2-parted, with toothed lips.
 STYLOSANTHES. Cal. tubular, very long, bearing the corolla: ovary below the corolla; loment one or two-jointed, hooked.
 LESPEDEZA. Cal. 5-parted, nearly equal: carina transversely blunt.
 ZORNIA. Cal. campanulate, 2-lipped: cor. inferior: vexillum cordate, revolute: anthers alternately oblong and round: legume jointed, hispid. S.

HEDYSARUM. Cal. 5-fid: carina transversely blunt: loment with 1-seeded compressed joints.

INDIGOFERA. Cal. spreading: carina with a spreading subulate spur on each side. S.

GALEGA. Cal. with subulate nearly equal teeth: legume with oblique streaks between the seeds.

PHACA. Cal. 5-toothed, two upper teeth most distant; legume half 2-celled, inflated. S.

OXYTROPIS. Carina ending in a mucro: legume 2-celled or half 2-celled, with the upper suture turned inwards. S.

ASTRAGALUS. Legume 2-celled, more or less gibbous, with the lower suture turned inwards, carina blunt.

DALEA. Alae and carina adhering to the column of stamens. Stamens 5-10, united, without a separate filament: legume 1-seeded. S.

PSORALEA. Cal. the length of pod: stamens diadelphous: legume 1-seeded, subrostrate valveless. S.

MELILOTUS. Cal. tubular, 5-toothed: carina simple, shorter than alae and vexillum: legume longer than calyx, rugose.

LUPINASTER. Cal. campanulate, 5-toothed, with setaceous teeth: stigma uncinata: legume not knotted, round, many-seeded. S.

TRIFOLIUM. Legume (in general) shorter than the cal., 1 or many-seeded, indehiscent, desiccous; flowers more or less capitate.

TRIGONELLA. Vexillum and alae nearly equal, spreading, in the form of a tripetalous corolla. S.

MEDICAGO. Legume falcate or spirally twisted, compressed, membranaceous.

HOSACKIA. Cal. bell-form, 5-cleft: the spreading wings of the corol almost equaling the banner; keel beaked: style filiform; stigma capitate: legume cylindric or sub-compressed, straight, smooth.

CLASS XVII. SYNGENESIA.

5 Stamens. Anthers united by their edges.

This class is one of the most extensive and best defined of all the Linnean classes. Its essential character depends as its name indicates, *Gr. sun* (Together) and *genesis*, (Generation) upon the adhesion of the anthers of the Flower into a single tube. It comprehends the whole of the Corymbiferae, Cichoraceae and Cinarocephaleae of Jusieu. In addition to the cohesion of the anthers, upon which this class immediately depends, it is further characterized by the flowers, com-

monly called florets, being clustered together in heads, and inserted upon a common receptacle, which is surrounded by the calyx. The receptacle is a cellular fungous surface bearing the florets. It is either columnar, conical, flat, or depressed; and naked, or covered with appendages called hairs or bristles, according to their nature, or paleae, when they are dilated and have a glumaceous appearance. If naked, and merely scarred by the insertions of the florets, it is called dotted or punctulate; when the scars are more considerable and deeper, the receptacle is said to be scrobiculate; if the insertions are so deep as to appear to be divided by membranous partitions, it is cellular, or favose, or alveolate: if furnished with hairs, it is villose; if with paleae, it is paleaceous or chaffy. The flower usually termed Floret, consists of two parts, the germ and the corolla, each with its appendages. The egret has generally been esteemed a superior calyx, and it is the opinion of M. Cassini that it is analogous to the scales of the receptacle, and the leaves of the involucre. The corolla is placed on the top of the germ. It is either funnel-shaped, with a limb divided into four or five equal lobes in which case, the florets are called tubular; or it is split on one side, and spread open into the form of a strap, when the florets are called ligulate.

The stamens are attached to the orifice of the tube of the corolla, just below the limb. Their filaments are usually, but not always, distinct; their anthers are adherent by their edges, and furnished with a little membranous appendage at the tip, and sometimes with two spur-like processes at their base. The style is filiform, and either split at the summit into two linear spreading stigmas, or consists of a single piece from the base to the summit. The form and surface of the stigma, and the upper part of the style, are subject to a great diversity of appearances, which are of the utmost importance in determining the affinities of the genera.

In a popular point of view, syngenesia may be considered interesting in a high degree. It abounds in plants of ornament, all of which are without exception, of easy cultivation. With regard to the qualities of syngenesious plants, considered economically or medicinally, it may be stated, that whatever they may be, they consist in a bitter principle, and an oily secretion.

ORDER I. EQUALIS.

Flowers of the disk and ray all perfect.

TRAGOPOGON. Involucre simple, of many leaves: receptacle naked; pappus feathery, stipitate: pericarps longitudinally striated. **E.**

TROXIMON. Invol. oblong, conical, simple or imbricated with unequal, recept. naked, dotted: egret sessile, hairy. **S.**

LACTUCA. Involucre imbricated, cylindrical, its scales with a membranous margin: receptacle naked; egret simple, stipitate.

SONCHUS. Involucre imbricated, swelling at the base: receptacle naked: egret simple, sessile.

PRENANTHES. Involucre with scales at the base: receptacle naked: egret simple, sessile: florets few.

LEONTODON. Involucre with scales that are frequently lax and flaccid: receptacle naked: egret simple, stipitate.

APARGIA. Involucre imbricated, with scales at the base: receptacle naked, dotted: egret feathery, sessile, unequal.

HIERACIUM. Involucre ovate, imbricated: receptacle nearly naked, dotted: egret simple, sessile.

BORKHAUSIA. Invol. oblong in two rows, the outer much shorter than the inner: receptacle alveolate: egret of the centre stalked, of the circumference sessile or subsessile. S.

APOGON. Calyx 8-leaved, in a double series: receptacle naked: egret none. S.

KRIGIA. Recept. naked: egret membranous, 5-leaved, with 5 bristles between: invol. many-leaved, simple.

CICHORIUM. Involucre surrounded with scales or smaller leaflets: receptacle naked or slightly hairy: egret sessile, scaly, shorter than the pericarp.

ARCTIUM. Involucre globose, each of its scales with an incurved hook at the extremity: receptacle chaffy: egret simple.

CARDUUS. Involucre swelling, imbricated with spinous scales: receptacle hairy: egret deciduous, rough.

CNICUS. Involucre swelling, imbricated, with spinous scales: receptacle hairy: egret deciduous, feathery.

ONOPORDUM. Involucre swelling, its scales spreading and spinous: receptacle cellular: egret deciduous, rough.

CYNARA. Recept. setose: invol. dilated, imbricated; scales fleshy, emarginate, with a point: egret sessile, feathery. E.

STOKESIA. Recept. naked: egret with four bristles: invol. leafy, somewhat imbricated: heads radiated; florets of ray funnel-shaped, irregular. S.

CARTHAMUS. Receptacle paleaceous, setose: invol. ovate, imbricated; scales ovate, leafy at end: egret paleaceous, hairy, or none. E.

VERNONIA. Recept. naked: invol. ovate, imbricated: egret double: outer paleaceous: inner capillary.

LIATRIS. Recept. naked: invol. oblong, imbricated: egret feathery.

MIKANIA. Recept. naked: invol. 4-6-leaved, equal, 4 or 6-flowered.

SPARGANOPHORUS. Invol. sub globose, imbricated, with unequal scales, recurved, spreading at the end: recept. naked; pericarps crowned with a somewhat cartilaginous cup.

EUPATORIUM. Involucre imbricated, oblong: florets few: receptacle naked: egret rough.

KUHNTIA. Calyx imbricate, cylindrical: egret plumose, scissile: receptacle naked: seed hairy, finely striated.

STEVIA. Recept. naked: pappus paleaceous: invol. cylindrical in a single row. S.

BRICKELLIA. Calyx many-leaved, imbricate: receptacle naked, dotted: egret hairy or scabrous: seed nearly glabrous, 10-streaked. S.

HYMENOPAPPUS. Invol. hemispherical, imbricated: receptacle flat, naked: florets all tubular.

HYMENOPAPPUS. Invol. many-leaved, spreading: scales ovate, colored: recept. naked: egret many-leaved, paleaceous. S.

MELANANTHERA. Recept. paleaceous, convex: invol. many-leaved, in a double row: egret of from 2 to 18 rough bristles: pericarps turbinate, angular. S.

MARSHALLIA. Recept. paleaceous: egret of 5 membranous acuminate.

nate paleae: invol. imbricated; scales somewhat lanceolate, incumbent. S.

BIDENS. Involucre of many leaves, with many foliaceous bractes at the base: receptacle plane, chaffy: cor. sometimes radiant: pericarp crowned with from 2-5 persistent awns, which are rough, with minute deflexed bristles.

PLATYPTERIS. Invol. many-leaved, imbricated, squarrose: recept. convex, paleaceous; pericarps compressed, winged, with 2 awns at top. S.

CACALIA. Recept. naked; egret pilose: invol. cylindrical, oblong, at the base only with bracteolae.

CHRYSOCEMA. Recept. naked; egret simple: invol. hemispherical, imbricated: style scarcely longer than florets.

SANTOLINA. Recept. paleaceous: egret 0: invol. imbricated, hemispherical. S.

ORDER II. SUPERFLUA.

Florets of the disk perfect: of the ray pistillate.

TANACETUM. Invol. hemispherical, imbricated: recept. naked: florets of the ray trifid, obsolete, sometimes wanting: pericarps crowned with a membranous egret.

ARTEMISIA. Calyx imbricate, ovate, with scales rounded, converging: ray-florets subulate: egret 0: receptacle sub-villose, or naked.

GNAPHALIUM. Recept. naked; egret hairy or feathery: invol. imbricated: marginal scales round, scarious, colored.

BACCHARIS. Recept. naked; egret pilose: invol. imbricated, cylindrical.

Pistillate florets mixed with the perfect ones.

CONYZA. Invol. roundish, imbricated: recept. naked: florets of the ray 3-cleft: egret rough.

PTEROCALYX. Calyx imbricate, with close-pressed, downy, sub-scarious scales: receptacle naked: perfect and pistillate florets intermixed: the pistillate ones slender: border 3-toothed: perfect ones with a 5-cleft border: egret hairy, scabrous: seed angled, hairy. S.

ERIGERON. Invol. imbricated: recept. naked: florets of the ray numerous, very narrow, mostly of a different color from the disk: egret simple.

TUSSILAGO. Invol. simple, equal, sub-membranaceous, swelling: receptacle naked: egret simple.

SENECIO. Invol. sub-cylindrical, equal, scaly below; the scales withered at the tip: recept. naked: egret simple.

ASTER. Invol. imbricated: its lowermost scales spreading, recept. naked: florets of the ray more than 10 generally: egret simple pilose.

SOLIDAGO. Invol. imbricated, its scales connivent: recept. naked: florets of the ray (of the same color as the disk) about 5, always less than 10: egret rough.

CINERARIA. Recept. naked: egret simple: invol. simple, many-leaved, equal.

INULA. Invol. imbricated; recept. naked: florets of the ray very numerous, linear: anthers with 2 bristles at the base: egret simply composed of hairs.

ARNICA. Recept. naked: egret simple: invol. with equal leaves: florets of ray, generally with 5 filaments, without anthers.

TETRAGONOTHECA. Recept. paleaceous; egret 0: invol. 1-leaved: 4-cornered, 4-parted. S.

HELENIUM. Recept. naked; of the ray paleaceous: egret 5-awned: invol. 1-leaved, many-parted: florets of ray half trifold.

BELLIS. Invol. hemispherical, its scales equal; receptacle naked, conical. E.

BOEBERA. Invol. double; outer many-leaved: inner 8-leaved: receptacle naked: egret hairy. S.

TAGETES. Recept. naked: egret with 5 erect awns: invol. simple, 1-leaved, 5-toothed, tubular; florets of ray 5, persistent. E.

DONIA. Calyx hemispherical, imbricate, squarrose, glutinous: ray florets 30 or more, (yellow:) receptacle naked, deep pitted: egret consists of 3 or 4 caducous, somewhat chaffy, bristles. S.

BRACHYRIS. Calyx cylindric-ovate, closely imbricate; scales agglutinated together; ray and disk florets about 5 to each: receptacle naked: egret very short, chaffy: glumes 5 to 8 permanent. S.

TRICOPHYLLUM. Calyx oblong-cylindric, many-leaved, equal: ray florets oblong: receptacle naked: egret chaffy, minute, 5 to 8-leaved: leaflets obtuse, awnless. S.

CHRYSOPSIS. Calyx imbricated: (ray-florets mostly yellow) anthers naked at the base: receptacle naked: egret double: outer chaffy, minute; inner scabrous, many-rayed: seed obovate, villous. S.

ACTINELLA. Calyx many-leaved, sub-equal, flat: ray-florets (8 to 20) 3-toothed, widening towards the extremity: receptacle naked, hemispherical: egret chaffy, 5 to 8 awned glumes. S.

PECTIS. Recept. naked: egret with 3 or 5 awns: invol. 5-leaved, florets of ray 5. S.

ZINNIA. Receptacle paleaceous: egret with 2 erect awns: invol. vate, cylindrical, imbricated: florets of ray 5, persistent entire. S.

MATRICARIA. Invol. hemispherical or almost plane, imbricated, with scales whose borders are membranous: receptacle naked, almost cylindrical: egret none. E.

CHRYSANTHEMUM. Invol. hemispherical, imbricated with scales whose borders are membranous: recept. naked: egret none.

BOLTONIA. Receptacle favose, hemispherical: egret toothed, awned, somewhat 2-horned: rays numerous: invol. imbricated.

ANTHEMIS. Invol. hemispherical, its scales nearly equal; their margins scarious: recept. convex, chaffy: pericarp crowned with a membranous border or egret.

ACHILLEA. Invol. ovate, imbricated, unequal: recept. plane, chaffy: florets of the ray 5-10, roundish, obcordate: pericarps naked.

STARKEA. Recept. hirsute: egret sessile, hairy; invol. imbricated. S.

ECLIPTA. Receptacle paleaceous: egret 0: florets of disk 4-fid. S.

SIEGESBECKIA. Recept. paleaceous: egret 0: outer invol. 5-leaved, inner spreading: ray halved. S.

VERBESINA. Recept. paleaceous: egret awned: invol. in one row: florets of the ray about 5.

ACMELLA. Invol. simple, with a few somewhat leafy divisions: recept. oblong, paleaceous: heads radiant: pericarps 4-cornered, truncate at end, naked. S.

HELIOPSIS. Invol. imbricated with ovate lined squamae; cor. of ray

linear, large: recept. paleaceous, conical, with lanceolate paleae: pericarps 4-cornered: egret 0.

BUPIITHALMUM. Recept. paleaceous: egret an obsolete limb: sides of pericarps, especially of the ray, edged. S.

ORDER III. FRUSTRANEA.

Florets of the disk fertile: of the ray sterile.

HELIANTHUS. Recept. chaffy, flat: egret 2-leaved: cal. imbricated, sub-squarrose.

RUDBECKIA. Recept. paleaceous, conical; egret with a 4-toothed rim: invol. with a double row of scales.

GALARDIA. Receptacle chaffy, hemispherical: egret many-leaved, paleaceous: invol. imbricated, many-leaved, flat: rays 3-parted. S.

BALDUINA. Calyx imbricate, squarrose-leafy: ray-florets somewhat 3-cleft: receptacle hemispherical, horn-like, cellular; egret chaffy, awnless, erect, about 10-leaved: seeds immersed in the receptacle. S.

COREOPSIS. Recept. paleaceous: pericarps compressed, emarginate: egret with 2 horns: invol. double, each many-leaved.

LEPTOPODA. Calyx simple, many-parted: rays 20 or more, 3-cleft, widening at the top: receptacle naked, hemispherical: egret consists of 8 to 10 awnless chaff-like valves. S.

ACTINOMERIS. Calyx simple, many-leaved, leafy, sub-equal: rays remote, elongated (4 to 8:) receptacle small, chaffy; the leaflets embracing the margin of the seed: seed compressed, margined; crowned with 2 permanent awns.

CENTAUREA. Invol. scaly: receptacle bristly: corollas of the ray, funnel-form, irregular, longer than those of the disk: egret simple. E.

ORDER IV. NECESSARIA.

Florets of the ray pistillate fertile: of the disk staminate.

GYMNOSTYLUS. Calyx many-leaved, the leaflets in a single series: pistillate flowers apetalous: seeds compressed, somewhat toothed at the summit, awned with the permanent style. S.

BALTIMORA. Recept. paleaceous; egret 0: invol. cylindrical, many-leaved: ray 5-flowered. S.

SILPHIUM. Recept. paleaceous: egret with a 2-horned edge: invol. squarrose.

POLYMNIA. Recept. paleaceous: egret 0: invol. double: outer 4 or 5-leaved; inner 10-leaved, with common leaflets.

CHAPTALIA. Recept. naked: egret capillary: florets of the ray in a double row, deformed; of the disk bilabiate. S.

CHRYSOGONUM. Invol. 5-leaved: recept. paleaceous: egret 1-leaved, 3-toothed: pericarps with a little 4-leaved calyx. S.

CALENDULA. Recept. naked: egret 0: invol. many-leaved, equal: pericarps of the disk membranous. E.

PARTHENIUM. Receptacle paleaceous, flat: pericarps obovate, nearly naked: invol. 5-leaved. S.

IVA. Recept. pilose: pericarps naked, blunt: invol. 3-leaved: florets of ray 5: styles 2, long.

ORDER V. SEGREGATA.

Each floret having its own peculiar calyx.

ELEPHANTOPUS. Invol. 4-flowered: florets ligulate, perfect: recept. naked: egret setaceous.

ECHINOPS. Invol. 1-flowered: florets tubular, perfect: recept. setose: egret obsolete.

CLASS XVIII. GYNANDRIA.

The singular plants which constitute this class are distinguished from all others by the anomalous structure of their flowers. These do not as is usually the case, contain a certain number of stamens, surrounding a central germ or style, but are furnished with a solitary fleshy, undivided process, which supplies the place of stamens and style. The nature of this process has been variously explained: the modern opinion is, that it is formed by the accretion of the stamens and style into a single mass, and this opinion seems to be confirmed by analysis and analogy. The pollen is either granular, divided into many separable small pieces, as in Orchis; or powdery, consisting of an infinite number of granules, or waxy, when it consists of a few large concrete masses. The stigma is most frequently concave, and placed nearly under the anther, but in such a manner, that there is no contact between it and the pollen.

Gynandrous plants are among the most interesting of the vegetable productions of the globe, whether we consider the vivacity of their colors or the singularity of their organization, or the grotesque appearance of their tortuous roots, or the delicious perfume of their flowers. They are distributed in abundance over all the earth.

ORDER I. MONANDRIA.

Stamen 1.

1. *Anther terminal, erect. Pollen granular, cohering by an elastic thread.*

ORCHIS. Cor. ringent: lip spurred on the under-side at the base: glands of the stalks of the pollen-mas (1-2) contained in one common little anther-like pouch.

HABENARIA. Cor. ringent: lip spurred on the upper-side, at the base beneath: glands of the stalk of the pollen-mass naked, distinct, with the cells of the foot-stalks adnate or separated.

2. *Anthers parallel with stigma. Pollen powdery.*

GOODYERA. Cor. ringent, with the 2 exterior or lateral segments of the perianth placed beneath the lip, which is gibbous at the base and undivided at the extremity: column free: pollen angular.

NEOTTIA. Flowers connivent: lip sessile, 2-lobed, with no calli: anther terminal, sessile: stigma 2-lipped, pervious; the front lip thickened.

LISTERA. Flowers connivent: lip 2-lobed, sessile, with no calli: anther intramarginal, half covered over by the hooded climandrium: stigma closed, nearly flat, with a strong transverse furrow.

* CRANICHIS. Coral 5-petalled, resupinate, sub-ringent: lip behind, vaulted: pollen farinaceous. S.

3. *Anther terminal, persistent. Pollen powdery.*

ARETHUSA. Lip united at base with the column, at the end hooded, in the inside crested: sepals 5, united at base: pollen angular.

CALOPOGON. Lip at the back clawed, with a beard inside: sepals 5, distinct: column separate: pollen angular.

POGONIA. Lip sessile, hooded, crested inside, sepals 5, distinct, without glands: pollen farinaceous.

CORALLORHIZA. Lip produced behind, adnate, with the spur free: column free: masses of pollen 4, oblique not parallel.

TRIPHORA. Petals 5, distinct, equal and converging, without glands: lip unguiculate cowed: style spatulate, even, flattened, wingless: pollen farinaceous.

5. *Anther terminal, opercular, deciduous. Pollen waxy.*

CYMBIDIUM. Lip not spurred, concave, jointed with the simple base of the column: sepals spreading, distinct: pollen-masses 2, 2-lobed behind.

EPIDENDRUM. Column united with the claw of the lip and forming a tube which sometimes runs down the ovary: pollen-masses 4, with as many powdery reflexed little stems. S.

BLETIA. Lip sessile, cucullate; sometimes spurred at the base, sepals 5, distinct: column separate: pollen-masses 8 or 4, 2-lobed. S.

TIPULARIA. Petals spatulate, spreading: lip entire, sessile: conspicuously spurred below, at the base: style wingless, lengthened, free: anthers in the form of a lid, permanent, masses of pollen 4, parallel.

APLECTRUM. Petals equal, converging: lip unguiculate, not spurred or extended at the base: masses of pollen 4, oblique, lenticular, situated below the summit of the style.

MALAXIS. Lip flat, expanded, regularly vertical: column round: pollen-masses 4, loose.

MICROSTYLIS. Lip flat sagittate, or deeply cordate: column very small, round: pollen-masses 4, loose.

CALYPSO. Lip ventricose, spurred beneath, near the end: sepals ascending, 1-sided: column petaloid, dilated: pollen-masses 4. S.

ORDER II. DIANDRIA.

Stamens 2.

CYPRIPEDIUM. Lip ventricose, inflated: column terminated by a petaloid lobe dividing the anthers: two anterior sepals usually united.

ORDER VI. HEXANDRIA.

Stamens 6.

ARISTOLOCHIA. Calyx 0; cor. 1-petallous, ligulate, ventricose at base: caps. 6-celled, many-seeded, inferior.

ASARUM. Calyx somewhat bell-form, 3 or 4-cleft, superior: corol 0: anthers proceeding from the middle of the filaments: stigma 6-cleft: capsule coriaceous, 6-celled, crowned with the calyx. (Wild ginger.)

CLASS XIX. MONOECIA.

Stamens and pistils in distinct flowers, but upon the same plant.

This class consists of staminate and pistillate plants of all kinds, natures, and affinities, combined by the character of having their flowers upon the same plant; in which respect Monoecia is distinguished from the next class, Dioecia. It contains nearly all the most important timber-trees of the temperate countries of the world, such as the oak, the pine, the birch, the beech, the walnut, the plane, the cypress, and many others. The bread-fruit, so important an article of food in some parts of the world, is placed in this class; various palms occupy a station in the class. To Monoecia Polyandria, belongs the famous Upas-tree of Java, to which so many fables are attached. It is now ascertained to be a species of *Antiaris*. From *Siphonia elastica*, a plant of Monoecia Monadelphica, and native of Brazil, one of the kinds of Caoutchouc, or gum-elastic of commerce, is obtained.

ORDER I. MONANDRIA.

Stamen 1.

ZANNICHELLIA. Barren fl. perianth none: fertile fl. perianth single, of 1-leaf: germens 4 or more: style 1; stigma pellate: capsules sessile.

ZOSTERA. Calyx and corol 0: stamens and pistils in two rows on one side of a spadix: spathe leaf-like: staminate flowers with anthers ovate, sessile, alternating with the germs: pistillate flowers with the germ ovate; style 2-cleft: drupe 1-seeded.

CAULINIA. Staminate flowers: calyx 0, corol 0; anthers sessile: pistillate flowers: calyx 0, corol 0: style filiform: stigma 2-cleft: capsule 1-seeded. (Flowers axillary.)

CHARA. Staminate flowers, calyx 0: corol 0: anthers globose, sessile: pistillate flowers—calyx 0: corol 0: style 0: stigmas 5; berry 1-celled, many-seeded.

EUPHORBIA. Involucre perianth-like, inflated with alternating petal-like segments: staminate florets, 12 or more at the base of the stipe of pistillate flower, each consisting of an anther united to a pedicel by a filament: pistillate flower central, single, stiped; with 3 2-cleft styles: capsule 3-lobed.

NAJAS. Staminate flowers—calyx cylindric, 2-cleft: stamen filamentous, long: anther 4-valved; valves spreading. Pistillate flowers—calyx 0: style 1, with 2 stigmas: nut 4-seeded.

ORDER II. DIANDRIA.

Stamens 2.

LEMNA. Staminate: cal. 1-leaved: cor. 0: pistillate: calyx 1-leaved: cor. 0: style 1: capsule 1-celled, 2-seeded.

PODOSTEMUM. Staminate flowers—calyx 0: corol 0: stamens affixed to a pedicel. Pistilate flowers—calyx 0: corol 0: germ ovate: stigma 1, sessile: capsule 2-celled, 2-valved, many seeded: seeds minute.

ORDER III. TRIANDRIA.

Stamens 3.

COMPTONIA. Staminate; a catkin: calyx a scale: petals 2: filaments 2-forked: pistilate; a catkin: calyx a scale: petals 6: style 2: nut ovate.

TRAGIA. Staminate; calyx 3-parted: cor. 0: pistilate; calyx 5-parted: cor. 0; style 3-fid: caps. of 3 pieces, and 3 cells: seeds solitary. S.

TYPHA. Flowers collected into cylindrical spikes or catkins: barren fl. perianth 0: stam. 3 together, upon a chaffy or hairy receptacle, united below into one filament: fertile flowers: perianth 0: pericarp pedicellate, surrounded at the base with hairs resembling an egret.

SPARGANIUM. Flowers in spherical dense heads: barren fl. perianth single of 3 leaves: fertile fl. single of 3 leaves: drupe dry, with 1 seed.

CAREX. Flowers collected into an imbricated catkin: barren fl. calyx of 1 scale, glumaceous: cor. 0: fertile fl. calyx of 1 leaf glumaceous: cor. of 1 leaf, urceolate, ventricose: stigma 2-3: nut triquetrous, included within the persistent cor.

ZEa. Staminate; in distinct spikes: cal. a 2-flowered blunt glume: cor. a blunt glume: pistilate: cal. a 2-valved glume: cor. a 2-valved glume: style 1, filiform. pendulous: seeds solitary, immersed in an oblong receptacle—the cob. S.

COIX. Staminate; in remote spikes: cal. a 2-flowered blunt glume: cor. a blunt glume: pistilate; calyx a 2-flowered glume: cor. a blunt glume: style 2-parted: seed covered by the bony calyx. E.

TRIPSACUM. Staminate; glume 2-flowered: outer staminate; inner neuter: cor. a membranous glume: pistilate: calyx a 1-flowered glume, surrounded by a 1-leaved involucre, perforated at the recesses: cor. a 2-valved glume: styles 2: seed 1.

SCLERIA. Staminate flowers—calyx glume 2 or 6-valved, many-flowered: corol glumes awnless: pistilate flowers—calyx 2 or 6-valved, 1-flowered, corol none: stigmas 1 to 3: nut colored, sub-globose.

MANISURIS. Somewhat polygamous: staminate flowers: calyx valves 2, lanceolate, flexuous: corol a mere rudiment: pistilate flower—calyx glume 2-valved, the outer one roundish, cartilaginuous: corol 2-valved: in the perfect flowers there are 3 stamens, 2 styles, seed 1: in some the stamens, styles and nectaries are wanting. S.

ORDER IV. TETRANDRIA.

Stamens 4.

ERIOCAULON. Common calyx many-leaved: florets many, in an imbricate head: partial perianth superior, 2 or 3-leaved: staminate flowers central with monopetalous cleft corols: pistilate flowers marginal, with 2-petalled corol: stigmas 2 or 3: capsules 2 or 3-celled, 2 or 3-lobed: seed 1, crowned with the corol.

ALNUS. Flowers collected into imbricated catkins: barren fl. scale of the catkin 3-lobed, with three flowers: perianth single, 4-partible: fertile fl. scale of the catkin sub-trifid, with 2 flowers: perianth 0: styles 2: fruit compressed

BETULA. Barren flower in a cylindrical catkin, its scales 3 fl. perianth 0: stamens 10-12: fertile fl.: scale of the catkin imperfectly 3-lobed, 3-flowered: perianth 0: styles 2: germens compressed, 2-celled, one abortive: nuts compressed, with a membranous margin, 1-seeded.

BUXUS. Staminate; calyx 3-leaved: petals 2: rudiment of an ovary: pistilate: calyx 4-leaved: petals 3: styles 3: caps. with 3 beaks and 3 cells: seeds 2. E.

MORUS. Staminate; cal. 4-parted: cor. 0: pistilate: cal. 4-leaves: cor. 0: styles 2: calyx berried: seed 1.

BOEHMERIA. Staminate; calyx 4-parted; cor. 0: nut 0: pistilate; cal. 0: cor. 0: style 1, seed 1.

URTICA. Barren fl. perianth single, of 4 leaves, containing the cup-shaped rudiment of a germen: fertile fl.; perianth single, of 2 leaves: pericarp 1-seeded, shining.

PACHYSANDRA. Staminate; calyx 4-leaved: cor. 0: pistilate; calyx 4-leaved: cor. 0: styles 3: caps. 3-horned, 3-celled: seeds 2. S.

DIORIS. Staminate; calyx 4-leaved: cor. 0: pistilate; calyx 1-leaved, 2-horned: style parted: seed 1, villous at the base, covered with 2-horned calyx. S.

PARIETARIA. Polygamous. Perfect flowers—calyx 4-cleft, inferior: corol 0: stamens elastic: style 1: seed 1: pistilate flowers—calyx 2-leaved: seed covered with the dry elongated calyx.

ORDER V. PENTANDRIA.

Stamens 5.

SCHIZANDRA. Staminate; cal. 9-leaved in a tripple row: cor. 0: anthers sub-sessile, cohering at end: pistilate: as ovaries numerous, capitate: berries 1-seeded, inserted on a long filiform receptacle. S.

XANTHIUM. Staminate; common calyx imbricated: cor. monopetalous, 5-fid, funnel-shaped: pistilate: cal. a 2-leaved, 1-flowered involucre: cor. 0: drupe dry, muricated, 2-fid: nut 2-celled.

AMARANTHUS. Staminate; cal. 3-5-leaved: cor. 0: stamens 3-5: pistilate: cal. as of the staminate cor. 0: styles 3: caps. 1-celled, cut round about.

AMBROSIA. Stuminate; common cal. 1-leaved: cor. 1-petalous, 5-fid, funnel-shaped: recept. naked: pistilate: cal. 1-leaved, entire, 5-toothed beneath, 1-flowered: cor. 0: nut formed by the indurated calyx, 1-seeded.

CROTONOPSIS. Staminate flowers—calyx 5-parted: corol 5-petalled: pistilate flowers—calyx 5-parted: corol none: stigma 3, twice 2-cleft: capsule 1-seeded.

ORDER VI. HEXANDRIA.

Stamens 6.

ZIZANIA. Staminate; cal. 0: cor. a 2-valved blunt glume, mixed with the pistilate: female: cal. 0: cor. a 2-valved glume, cucullate and awned: style 3-parted: seed 1, enveloped in the plaited corolla.

HYDROCHLOA. Pistilate flowers—calyx none: corol 2-valved, sub-awnless: staminate flowers—calyx none: corol 2-valved, awnless: stigmas 2, very long: seed 1, reniform.

ORDER XIII. POLYANDRIA.

Stamens more than 6.

CERATOPHYLLUM. Barren fl. cal. multipartite: cor. 0: stam. 16-20: fertile fl. cal. multipartite: cor. 0: stigma nearly sessile, oblique: nut 1-seeded.

MYRIOPHYLLUM. Barren flowers: cal. of 4 leaves: petals 4: stamens 8: fertile fl. cal. of 4 leaves: petals 4: stigmas 4, sessile: nuts 4, subglobose, 1-seeded.

SAGITTARIA. Staminate flowers—calyx 3-leaved: petals 3: stamens about 24: pistilate flowers—cal. 3-leaved: petals 3: ovaries many: seeds many, naked.

POTERIUM. Barren fl. cal. of 4 leaves: cor. 4, partite: stamens 30-40: fertile fl. cal. of 4 leaves: cor. 4 partite: germens 2: fruit 2-celled, invested with the cal. E.

CASTANEA. Barren fl. in a very long cylindrical catkin: perianth single of 1-leaf, 6-cleft: stamen 5-20: fertile fl. 3, within a 4-lobed, thickly muricated involucre: perianth single, urceolate, 5-6-lobed, having the rudiments of 12 stamens: germen in-corp. with the perianth: 6-celled, with the cells 2-seeded; 5 of them mostly abortive: styles 6: nut 1-2-seeded, invested with the enlarged involucre.

OSTRAYA. Staminate flowers—an imbricated catkin: cal. a scale: cor. 0: filaments branched; pistilate a naked catkin: cal. 0: cor. 0: caps. inflated, imbricated, 1-seeded at base.

CARPINUS. Barren fl. in a cylindrical catkin; its scales roundish, ciliated at the base: stamens 8-20: fertile fl. in a lax catkin, its scales large, foliaceous, 3-lobed, 1-flowered: invol. 0: perianth of 1-leaf, urceolate, 6-dentate, incorporated with the 2-celled germen, of which 1 cell is abortive: styles 2: nut ovate, striated, 1-seeded.

FAGUS. Barren fl. in a globose catkin: perianth single, of one leaf, campanulate, 6-cleft: stamens 5-12: fertile fl. 2 within a 4-lobed prickly involucre: perianth single, urceolate, with 4-5 minute lobes: germen incorporated with the perianth, 3-celled, 2 of them becoming abortive: styles 3: nuts 1-seeded, invested with the enlarged involucre.

CORYLUS. Barren fl. in a cylindrical catkin, its scales 3-cleft: perianth 0: stamens 8: anthers 1-celled: fertile fl. perianth obsolete: germens several, surrounded by a scaly involucre: stigmas 2: nut 1-seeded, surrounded at the base with the enlarged united coriaceous scales of the involucre.

JUGLANS. Staminate flowers an imbricated catkin: cal. a scale: cor. 0, or 4-6-parted: filaments 4-36: Pistilate flowers—cal. 4-fid, superior: cor. 4-5 fid: styles 0, or 2: drupe coriaceous, with a furrowed nut. Subgenus, *CARYA*. Calyx-scale 3-parted: corol 0: nut sub-quadrangular, even. (Hickory.)

QUERCUS. Barren fl. in lax catkin: perianth single, somewhat 5-cleft: stamens 5-10: fertile fl. invol. cup-shaped, scaly: perianth single, incorporated with the germen, 6-lobed: germen 3-celled, 2 of them abortive: style 1; stigmas 3: nut (acorn) 1-celled, 1-seeded, surrounded at the base by the enlarged cup-shaped involucre.

LIQUIDAMBAR. Staminate flowers, a conical catkin, surrounded by a 4-leaved involucre: cal. 0: cor. 0: filaments numerous. Pistilate flowers in a globose catkin, surrounded by a 4-leaved involucre: cal. 1-leaved, urceolate, 2-flowered: cor. 0: styles 2: capsules 2, surrounded at base by calyx, 1-celled, many-seeded.

PLATANUS. Staminate flowers, a globose catkin: cal. 0: cor. scarcely any: anthers growing about the filaments: pistilate flowers, a globose catkin: cal. many-leaved: cor. 0: styles with a recurved stigma: seeds roundish, mucronate with the style papose at base.

CALADIUM. Staminate flowers—cal. and cor. 0: anthers peltate, many-celled, disposed in a spike at the end of the spadix: pistilate flower—cal. and cor. 0: ovaries inserted at base of spadix: style 0: berry 1-celled, many-seeded. S.

ARUM. Spathe of 1 leaf, convolute at the base: perianth 0: spadix with germen at the base: stem (sessile) near the middle of the spadix, which is naked above: berry 1-celled, 1-seeded.

LECONTIA. Spathe convolute: calyx and corol none: spadix naked above, bearing sessile anthers below the middle, and germs at the base: berry 1-celled, many-seeded. Reusselaeria, Beck.

CALLA. Spathe ovate, becoming expanded: spadix covered with the fructification: stamens intermixed. Staminate flowers—calyx and corol none: anthers sessile. Pistilate flowers—calyx and corol 0: berries 1-celled, many-seeded, crowned with the short style.

ORDER XV. MONODELPHIA.

Stamens united into a single body.

SICYOS. Staminate flowers—cal. 5-toothed: cor. 5-parted: filaments 3: pistilate flowers—cal. 5-toothed: cor. 5-parted: style 3-fid: gourd 1-seeded.

ACALYPHA. Staminate flowers—calyx 3 or 4-leaved, or 3 or 4-parted: corol none: stamens 8 to 16: pistilate flowers—calyx and corol like the staminate: styles 3, 2-cleft. capsule tricoccous, 3-celled; (having large bracts.)

PINUS. Staminate flowers—anthers 2-celled: pistilate flowers—scales in a conical cone, bracteole at base, digynous; pericarps attached to the inside of scale, more or less winged, deciduous: stigmas 2-3-fid: cotyledons 4-8.

CUPRESSUS. Staminate flowers—an imbricated catkin: cal. a scale: cor. 0: anthers 4, sessile, without filaments: pistilate flowers—a cone-like catkin: cal. a 1-fl. scale; cor. 0: stigma 2 concave dots: nut angular.

THUJA. Staminate flowers—an imbricated catkin: cal. a scale: pet. 4: anthers 4: pistilate flowers—a cone-like catkin: cal. a 2-flowered scale: cor. 0: nut 1, surrounded by an edged wing.

MOMORDICA. Staminate flowers—cal. 5-fid: cor. 5-parted: filaments 3: pistilate flowers—cal. 5-fid: cor. 5-parted: styles 3-fid: gourd dropping off, with elasticity.

CUCURBITA. Staminate flowers—cal. 5-toothed: cor. 5-fid; filaments 3: pistilate flowers—calyx 5-toothed; cor. 5-parted: ovary 3-fid; seeds of gourd, with a tumid edge. E.

CUCUMIS. Staminate flowers—cal. 5-toothed: cor. 5-parted: filaments 3: pistilate flowers—cal. 5-toothed: cor. 5-parted: ovary 3-fid: seeds of gourd with a sharp edge. E.

MELOTHRIA. Staminate flowers—cal. 1-leaved, 3 to 5-toothed: corol bell-form: filaments 3: pistilate flowers—calyx and corol as in the staminate, superior: style 1: stigmas 3: berry 3-celled, many-seeded.

STILLINGIA. Staminate flowers—cal. hemispherical, many-flowered: cor. tubular, eroded: pistilate flowers—cal. 1-flowered, inferior: cor. superior: style 3-fid: caps. 3-coccous. S.

PHYLLANTHUS. Staminate flowers—cal. 6-parted: cor. 0: filament columnar: anthers 3: pistilate flowers—cal. 6-parted: cor. 0: disk with 12 angles: styles 3: capsule 3-coccous.

CROTON. Staminate flowers—cal. cylindrical 5-toothed: petals 5: stamens 10-15: pistilate flowers—cal. many-leaved: cor. 0: styles 3, bifid: caps. 3-celled: seed 1. S.

JATROPHA. Staminate flowers—calyx 0, or 5-leaved: cor. monopetalous, funnel-shaped: stamens 10, alternately shorter: pistilate flowers—cal. 0: cor. 5-petalous, spreading: style 3, bifid: caps. 3-celled, seed 1. S.

RICINUS. Staminate flowers—cal. 5-parted: cor. 0: stamens numerous: pistilate flowers—cal. 3-parted: cor. 0: styles 3, bifid: capsule 3-celled, seed 1. E.

CLASS XX. DIOECIA.

Staminate and pistilate flowers upon different plants.

To this class many of the observations made upon the last are equally applicable. Like it, the genera would have been more conveniently distributed among previous classes. The genera it contains are chiefly trees, and many of them form the most valuable portion of the forests of all parts of the world.

In Monandria is found the celebrated Pandanus, or screw pine, which, with its strange spiral branches, constitutes one of the most singular features of the vegetation of the Isle of France. Diandria contains the valuable salix; Pentandria, the hop, the hemp, and the spinage.

ORDER II. DIANDRIA.

Stamens 2.

SALIX. Barren fl.; scales of the catkin single-flowered, imbricated, with nectariferous gland at its base; perianth 0: stigmas 2, often cleft: caps. 1-celled, 2-valved, many-seeded; seeds comose.

FRAXINUS. Polygamous. Perfect flowers—calyx 0, or 3 or 4-parted: corol 0, or 4-petalled: pistil 1: samara 1-seeded, with a lanceolate wing: pistilate flowers—calyx, corol and pistils, same as perfect.

VALLISNERIA. Staminate flowers—spathe ovate, 2-parted: spadix covered with minute florets: perianth 3 parted: pistilate flowers—spathe 2-cleft, 1-flowered: perianth 3-parted, superior: corol 3-petalled: stigmas strap-like, 2-cleft: capsule valveless, 1-celled: seeds numerous, attached to the sides.

CERATIOLA. Calyx bud-like, imbricated with 6 to 8 scales; corol 0: stamens 2, exsert: stigmas unequal, (4 to 6) 2 of them larger; berry with 2 bony seeds. S.

ORDER III. TRIANDRIA.

Stamens 3.

FIGUS. Common receptacle turbinate, closed, fleshy: pistilate flow-

ers—cal. 5-parted: cor. 0: ovary 1: seed 1: staminate flowers—cal. 3-parted: cor. 0: stamens 3. E.

EMPETRUM. Barren fl.: cal. tripartite: cor. of 3 petals: (7 in E. B.) stam. 3, (9 in E. B.) upon long filaments: fertile fl.: cal. tripartite: cor. of 3 petals: style very short: stigma with 69 rays: berry superior, globose, with 6-9 seeds.

ORDER IV. TETRANDRIA.

Stamens 4.

VISCUM. Barren fl.: cal. 0: petals 4, dilated at the base, connate, resembling a cal.: anthers sessile, adnate with the petals: fertile fl.: cal. submarginate: petals 4, dilated at the base: style 1: drupe inferior, 1-seeded.

MYRICA. Barren fl.: scales of the catkin. concave: perianth 0: fertile fl. scales of the catkin concave: perianth 0: styles 2: crupe 1-celled, 1-seeded.

HIPPOPHAE. Staminate flowers—in a catkin, tetrandrous: pistillate flowers—solitary in the axillae of the leaves: calyx tubular, bifid at end, closed: disk 0: fruit formed of a berried calyx and akenium.

BROUSSONETIA. Staminate flowers—a cylindrical catkin: calyx 4-parted: pistillate flowers—a globose catkin: cal. tubular, 3-4-tooth: ovaries becoming fleshy, clavate, prominent: style lateral: seed 1, covered by the calyx. S.

MACLURA. Staminate flowers (not examined): pistillate flowers—calyx none: corol none: style 1, filiform, villous: germs numerous, becoming a berry-like aggregate, many-celled, 1-seeded; seed obovate, compressed. S.

ORDER V. PENTANDRIA.

Stamens 5.

NYSSA. Perfect flowers. Cal. 5-parted; cor. 0: stamens 5: ovary 1: drupe inferior: staminate flowers—cal. 5-parted; cor. 0: stam. 10.

XANTHOXYLUM. Staminate flowers—cal. 5-parted: cor. 0: stamens 3-5: pistillate flowers—ovaries 5: caps. 3-5, 1-seeded.

HAMILTONIA. Perfect flowers. Cal. 5-fid: cor. 0: nect. a 5-toothed disk: stamens 5; ovary 1: drupe inferior: staminate flowers: cal. 5-fid: cor. 0: nect. a 5-toothed disk: stamens 5.

IRESENE. Staminate flowers—cal. 2-leaved: petals 5: scales 5-7: pistillate flowers—stigmas 2, sessile: caps. with downy seeds. S.

SPINACIA. Staminate flowers—cal. 5-parted: cor. 0: pistillate flowers—styles 4: seed 1, within the indurated calyx. E.

AGNIDA. Staminate flowers—cal. 5-parted: cor. 0: pistillate flowers—cal. 3-parted: styles 0: stigmas 3, sessile: caps. 1-seeded.

CANNABIS. Staminate flowers—cal. 5 parted: pistillate flowers—cal. 5-leaved, entire, opening at the side; styles 2; nut 2-valved within the closed calyx. E.

HUMULUS. Barren fl.; perianth single, of 5 leaves: anthers with 2 pores at the extremity: fertile fl.: scales of the catkin large, persistent, concave, entire, single-flowered: perianth 0; styles 2; seed 1.

ORDER VI. HEXANDRIA.

Stamens 6.

SMILAX. Cal. 5-leaved: cor. 0; styles 3; berry 3-celled; seeds 2.

DIOSCOREA. Cal. 6-parted; cor. 0; styles 3; capsule 3-celled, compressed; seeds 2, membranous; leaves generally alternate.

GLEDITSCHIA. Perfect flowers. Cal. 4-fid; cor. 4 petals: stamens 6: a pod: staminate flowers—cal. 3-leaved: petals 3: stamens 6: pistilate flowers—cal. 5-leaved: petals 5; a pod.

ORDER VIII. OCTANDRIA.

Stamens 8.

POPULUS. Barren fl.: scales of the catkin lacerated; anthers 8-30, arising from a turbinate, oblique, entire, single perianth: fertile fl.: scales of the catkin lacerated: perianth, turbinate, entire, stigmas 4: caps. superior, 2-celled, 2-valved, many-seeded: seeds comose.

DIOSPYRUS. Perfect flowers. Cal. and cor. 4-fid: stamens 8: style 4-fid: berry 8-seeded: staminate flowers—cal. and cor. 4-fid: stamens 8.

ORDER IX. ENNEANDRIA.

Stamens 9.

HYDROCHARIS. Barren fl.: cal. tripartite: petals 3; the three interior filaments beaked: fertile fl.: cal. tripartite: petals 3: styles 6, each with 2 stigmas: caps. inferior, coriaceous, roundish, six-celled, many-seeded. S.

SERPICULA. UDORA. ELODIA. The perfect flowers have 3 stamens only: staminate flowers—calyx 3 parted: corol 3-petalled: stamens 9, 3 of them within: pistilate flowers—calyx 3-parted: tube very long: petals 3: barren filaments 3: capsule bladder-like, 3-seeded; seeds cylindrical.

ORDER X. DECANDRIA.

Stamens 10.

GYMNOCLADUS. Cal. 5-toothed: petals 5: style 1: legumen 1-celled, pulpy inside.

CARICA. Staminate flowers—cal. hardly any: cor. 5-fid, funnel-shaped: filaments in the tube of the cor. staminate flowers—cal. 5-toothed: petals 5: stigmas 5: berry furrowed, 1-celled, many-seeded. S.

ORDER XI. DODECANDRIA.

Stamens 12.

DATISCA. Staminate flowers—cal. 5-leaved: cor. 0; anthers sessile: pistilate flowers—cal. 2-toothed: styles 3: capsules 3, angular, 3 horned, 1-celled, pervious, inferior.

MENISPERMUM. Staminate flowers—cal. 2-leaved: petals 4 or 6 on the outside, 8 inside: stamens 16: pistilate flowers—stamens 8, sterile: ovaries 2-3; berries 2, 1-seeded.

ORDER XIII. POLYANDRIA.

Stamens numerous, inserted under the ovarium.

CYCAS. Staminate flowers—catkin imbricated; cal. a spatulate scale; cor. 0; anthers globose, sessile, on a scale: pistilate flowers—spadix compressed, 2-sided: cal. 0: cor. 0; style 1; drupe 1-seeded.

ZAMIA. Catkin like a cone: staminate flowers—calyx an obovate scale; cor 0; anthers globose, opening by a slit; sessile on the scale: pistilate flowers—cal. peltate scales; ovaries 2; style 0; berries 2, 1-seeded. S.

ORDER XV. MONADELPHIA.

Stamens united into one body.

JUNIPERUS. Barren fl.; scales of the catkin subpeltate; perianth 0; stam. 4-8, 1-celled: fertile fl.; scales of the catkin in few, united at length, fleshy, and surrounding the 3-seeded berry.

TAXUS. Barren fl.; perianth single at the base: stamens numerous: anthers peltate, 6-8-celled; cells opening beneath: fertile fl.; perianth single, urceolate, scaly: styles 0: drupe fleshy, perforated at the extremity.

CLASS XXI. CRYPTOGAMIA.

Stamens none, or undistinguishable.

This class differs essentially from all the preceding, in the peculiar conformation of the organs of reproduction, which are not formed of stamens and pistils like those of the higher classes of plants, but are of a nature altogether different, consisting either of buds under a particular form, or of vessels containing vegetable substances, analagous to seeds, but differing in not being the result of pollennial fertilization, and in having the power of striking root indifferently from any point of their surface. The internal composition of these vegetable substances, which are denominated sporules, is, on account of their extreme minuteness, unknown. Willdenow describes Cryptogamous plants to be vegetables, without any visible flower, and differing from other plants in their external characters, in which respect they also differ from each other. For the purposes of this work, which follows the system of Linnaeus, the definition, if it can be so called, of Willdenow, is applicable. In the arrangement of the orders of Cryptogamia, it has been found advisable to adhere to the divisions of modern writers, who, by extensive observations, and great powers of perception, have brought this most abstruse part of botany to a considerable degree of perfection.

This class is divided into 6 natural orders, conforming with the artificial.

I. FILICES. Fern-like plants, which have green herbage. They have their stems, leaves, and fruit united in a frond.

SUB-ORDERS.

1. *Filices proper* (polypods, brakes.) Thecae naked, or covered with involucre, and are placed on the back of a frond. The frond is either foliaceous or contracted in such a way, as only to cover the clusters of thecae (sori.) They are always circinal—capsules opening crosswise.

2. *Equisetaceae* (rushes.) Reproductive organs uniform, in terminal spikes, composed of peltate, several sided scales, producing on their under surface (four to seven) elongated involucres containing the seeds; branches whorled, rigid.

3. *Lycopodiaceae* (ground-pines.) Reproductive organs axillary, sometimes apparently spiked; thecae? of two kinds; the one containing granules, the other large bodies: stems covered with many small leaves.

4. *Marsileaceae* (pipe-wort, pill-wort). Reproductive organs radical, uniform: sporules? in roundish, one or many-celled indehiscent heads: plants simple, aquatic.

II. MUSCI. (Mosses.) Reproductive organs of two kinds: thecae many-seeded, solitary, furnished with an σ

III. HEPATICAE. (Liverwort.) Reproductive organs of two kinds. 1st. Thecae without an operculum, either naked or sessile, or furnished with a rail through which they are, more or less protruded: sporules naked or mixed with spiral threads. 2d. Minute, roundish, or oblong bodies, variously situated. Plants frondose, of a cellular structure, not submersed.

IV. ALGAE. (Frog spittle, sea-weeds.) Reproductive organs of two kinds. 1st. Thecae or tubercles, variously situated. 2d. Sporules or granules naked, or immersed in the frond: plants always aquatic, and submersed.

V. LICHENES. (Lichens.) Reproductive organs uniform: sporules deposited in receptacles of various forms, distinct in substance, from the thallus, which is either pulverulent, crustaceous, membranous, foliaceous, or branched and shrub-like.

VI. FUNGI. (Toad-stools mould.) Reproductive organs uniform: sporules arranged in tubular cells, placed in some part of the external surface: substance various, mostly thick and fleshy, sometimes vesicular: thallus none.

SUB-ORDER I. FILICES.

This is the most beautiful of all the orders of cryptogamic plants, and has always been a favorite tribe, to which the most celebrated botanists of all modern times have given their attention. The principal distinction which exists between ferns and other orders of Cryptogamous plants, is found in the situation of what are called their sori, or patches of reproductive organs, which are in all cases inserted upon the back surface of the leaf, or, as it is called in ferns, the frond: sometimes appearing only in the form of little spots, sometimes covering the whole of the under-side of the frond, and sometimes contracting the substance of the frond, so as to give it the appearance of a single mass of fructification, bursting in a determinate manner, as in the *Csmunda*. Besides this character, the fronds are always rolled up in a circinate manner when they are first developed.

That part of the frond which occupies the place of the petiole of a compound leaf is called the rachis. The groups of thecae forming the organs of reproduction, are called sori, which are either naked or covered with an involucrum, or, as it is more frequently termed, indusium. This latter organ, when present, either bursts outwardly, towards the margin of the frond, or inwardly towards the midrib or rachis. It may also, be either single or double; the latter term signifying, that there is

a cover on each side the sorus. The bodies which are called thecae by some authors, and capsules by others, are constructed in two ways; they are either surrounded by an elastic furrowed ring, when they are called Annulatæ, or they are destitute of such a ring, in which case they are termed Exannulatæ. They contain the minute powdery matter, which is that by which ferns are reproduced; the constituent parts of this matter are called sporules, and are analogous to seeds in more perfect plants.

Thecae 1-celled, with an articulated, elastical, longitudinal ring, bursting across in an irregular manner.

ACROSTICHUM. Thecae scattered, occupying all the lower surface of the frond, or a part of it: indusium none.

POLYPODIUM. Sori in little round scattered convex spots: indusium none.

ONOCLEA. Sori globose, inserted upon columnar receptacles, inclosed within the berry-like pinnules: indusium double: common placed on the edge of the pinnule, and united into the form of a berry; proper membranous enveloping the sori.

STRUTHIOPTERIS. Sori linear, crossing, inserted upon crested receptacles, included in a double row within the somewhat articulated pinnæ: indusium double: common marginal, opening inwards in a rugged manner; proper membranous, and resembling a partition.

BLECHNUM. Sori linear, continuous (sometimes interrupted) contiguous to the midrib: indusium membranous, superficial, continuous, opening inwards.

WOODWARDIA. Sori oblong, distinct, in rows, parallel, contiguous to the midrib: indusium membranous, superficial, vaulted, opening inwards.

ASPLENIUM. Sori linear, placed upon lateral veins: indusium membranous, flat, separating inwardly.

SCOLOPENDRIUM. Sori linear, oblique, opposite, double, parallel: indusia membranous, opening in opposite pairs.

PTERIS. Sori continuous, linear, marginal: indusium from the inflexed edge of the frond, opening inwards.

HYPOPELTIS. Fruit dots roundish, having a cup-form involucre beneath, divided into 5 or 6 irregular segments: capsules all sessile.

VITTARIA. Sori solitary, continuous, linear, marginal or sub-marginal, immersed: indusium double, superficial.

ADIANTUM. Sori inserted into the indusium, linear, contiguous, or roundish: indusium marginal, opening inwards, either nearly continuous, or squami-form or reni-form.

CHEILANTHES. Sori dot-like, separate, marginal, in the recess of the indusium: indusium either reflexed crenules of the frond, or squami-form, membranous, and arising from the margin, or nearly continuous, opening inwards.

DICKSONIA. Sori dot-like, marginal, solitary in the recesses of the frond: indusia membranous, nearly globose, marginal, adnate, opening, unequally with lacerated orifices and spreading back in all directions.

ASPIDIUM. Sori roundish, scattered: indusium solitary, orbicular peltate, or reniform.

WOODSIA. Sori dot-like, scattered: indusium membranous, placed under the sori, somewhat cup-shaped and ciliated.

HYMENOPHYLLUM. Sori marginal, inserted upon a claviform receptacle: indusium erect, 2-valved.

TRIBE II. OSMUNDACEAE.

Thecae without a ring, netted, pellucid, with radiating striae upon their top, bursting lengthwise on one side.

OSMUNDA. Sori nearly globose, alternately arising from the margin of a frond, which becomes changed into a panicle: thecae globose, stalked, netted, opening from their base as high as a pellucid dorsal projection: indusium none.

LYGODIUM. Thecae oblong-ovate, striated at the end in a radiate manner, seated in two rows upon 1-sided marginal spikelets fixed by their backs and opening lengthwise in front: indusium funnel-form, covering up each capsule.

SCHIZAEA. Capsules top-form, partly opening by an oblong lateral pore; striate longitudinally and radiately, situated upon the back part of a narrow, spike-form appendage of the frond, surrounded with, or interspersed among, bundles of hairs: the appendages, bearing the capsules are generally digitate, and occupy the summit of the frond.

TRIBE III. OPHIOGLOSSAE.

Thecae 1-celled, adnate at base, roundish, coriaceous, opaque, without a ring, not vascular, sometimes fastened together, half-bivalved.

BOTRYCHIUM. Thecae naked, globose, distinct, attached to the rachis of a compound spike, half 2-valved, opening nearly at one side.

OPHIOGLOSSUM. Thecae naked, connate in a distichous jointed spike, half 2-valved, opening at the side.

SUB-ORDER 2. EQUISETACEAE.

This order contains one genus only, which is among the most puzzling of all the anomalous formations which are so frequently met with among the lower orders of vegetation. Both the stems and branches are regularly articulated, and arise from a tubular sheath. There are no leaves, and the reproductive organs are arranged in a terminal spike, on all sides of which are inserted many peltate scales with several sides or angles. Several wedge-shaped hollow bodies, project from the surface of these scales and, bursting, inwardly discharge their contents, which are not yet well understood. They consist of a number of green roundish bodies surrounded by minute granules, and furnished at the base with four elastic filaments thickened at their apex.

EQUISETUM. Fruit placed under peltate polygons, being pileus-like bodies, which are arranged in whorls, forming a spike-form raceme, 4 to 7 spiral filaments surround the seed, which resemble green globules. Fertile plants mostly leafless; the stems of all are jointed with toothed sheaths at every joint, and usually longitudinally striated and hollow.

SUB-ORDEE 3. LYCOPODINEAE.

The reproductive organs of these plants are always axillary, the apparently spiked arrangement which they occasionally present, being caused by the partial abortion of the leaves, at the base of which they are seated: the thecae, the nature which is very doubtful, and which have accordingly been called by different writers capsules, conceptacula, and cocci, are formed of from one to three valves, and of a similar number of cells, and contain either a mass of minute powdery granules or some corpuscles of a larger size. The nature and properties of both these are uncertain.

LYCOPodium. Thecae reniform, 1-celled, 2-valved, with many spores: spores very minute, powdery: very leafy, their stems being generally covered with 2, 3, or 4 rows of narrow, simple, entire leaves.

PSILOPUM. BERNHARDIA. Thecae 3-coccos, 3-celled: cells opening upwards, half 2-valved: fruit in spikes.

SUB-ORDER 4. MARSILEACEAE.

Very few plants are found in this order, their vegetation is various; they are at most a few inches high, and are more or less aquatic: in *Isoetes* the leaves, those of a young rush: the organs of reproduction are always near the root, and are variable, and their nature is by no means understood: in *Pilularia* it consists of a roundish head, divided internally into 1-4 cells, each cell containing small bodies of two kinds: in *Isoetes* the fructification is even less known and understood.

ISOETIS. Head membranous, not opening, immersed in the base of the frond, 1-celled: spores angular, inserted upon many filiform receptacles.

PILULARIA. Heads imbricated, solitary, nearly sessile, globose, coriaceous, 4-celled: cells containing two kinds of bodies.

AZOLLA. Monoecious. Staminate appendages by pairs contiguous: involucre sub-globose, resembling a 1-celled capsule: seeds numerous, naked.

SALVINIA. Involucre imbricate, 4 to 9, connate, resembling a 1-celled capsule: seeds inserted on a central receptacle.

ORDER II. MUSCI.

Mosses are distinguished from all other associate plants, by the peculiar nature of the reproductive organs, which are of two kinds. The principal and the most obvious is the thecae, which is furnished with an operculum or lid, by means of which the spores are retained in the thecae, and a columinella, or central axis, to which they are attached. The other consists of minute spherical pedicellated organs, concealed in the axils of some of the leaves, and called anthers by Hedwig: the thecae is either entire, or split into four valves. When it is young, it is enclosed in an indusium, which is torn asunder as the thecae is elongated, and being carried up with it, remains upon the summit of the thecae in the form of a little extinguisher, called calyptra; if the calyptra is slit up one side, it is called dimidiate, if divided at the base into many short clefts, it is termed mitriform: the orifice of the theca when the operculum is removed, is either covered by a simple membrane, or by various processes called the peristome, either annular, or in the form

of teeth, and arranged in a single or double row. These processes vary in number, and in the manner of their division; from such differences, excellent characters for the genera have been obtained.

GENERA SELECTED FOR ILLUSTRATION.

N. B. Throughout all the Phenogamous Classes, and the first Order of the Class Cryptogamia, all the well known and well defined genera and species of plants, indigenous to North America, are described. The general characters of the five remaining orders are given; but no more genera and species in these orders, are described, than appeared to be necessary for illustrating these characters.

Theca entirely sessile; its receptacle stalked and without perichaetial leaves.

SPHAGNUM. Receptacle of theca stalked: peduncle resembling a fruit stalk: theca sessile on the receptacle: mouth naked.

Theca more or less stalked: with perichaetial leaves; not valvular. Theca terminal.

GRIMMIA. Fruit-stalk terminal; peristome single, of 16 entire, or perforated, rarely cleft teeth: calyptra mitriform.

DICRANUM. Fruit-stalk terminal: peristome single, of 16 bifid, equidistant teeth: calyptra dimidiate.

FUNARIA. Fruit-stalk terminal: peristome double, oblique; outer and inner ones, each of 16 teeth opposite to each other.

BRYUM. Fruit-stalk terminal: peristome double; outer one of 16 teeth; inner one of a membrane cut into 16 equal segments, with filiform processes often placed between them: calyptra dimidiate.

POLYTRICHUM. Fruit-stalk terminal; peristome double: outer one of 32 or 64 equidistant incurved teeth; inner one of a dense, horizontal membrane connected with the outer teeth: calyptra dimidiate.

Theca lateral.

NECKERA. Fruitstalk lateral: peristome double: outer one of 16 teeth; inner one of 16 ciliary processes connected only at the base by a short membrane: calyptra halved.

HYPNUM. Fruit-stalk lateral: peristome double: outer one of 16 teeth; inner of a membrane, cut into 16 equal segments, with filiform processes often between them: calyptra dimidiate.

ORDER III. HEPATICAE.

This order is distinguished from Algae, with which it was formerly united by the nature of the theca and of the foliaceous frond which is never submersed, and which bears a greater affinity to that of Musci: from these Hepatica differs in being destitute of an operculum or lid to the theca, and, with exception of Marchantia and Jungermannia, of a calyptra. The order is composed of seven genera, all very different from each other, and forming an assemblage which is only natural in regard to the organs of vegetation: it does not appear possible to reconcile those of reproduction. The herbage consists of a variously dilated frond, lying flat upon the substance on which it grows, generally naked, but in many Jungermannies covered with small leaves, which are often divided, but never really nerved; so that, in fact, they should rather be considered dilatations of the frond. The substance is generally loosely

cellular, sometimes compact, as in *Marchantia*, in which Hooker asserts that pores of the epidermis exist.

GENERA SELECTED FOR ILLUSTRATION.

JUNGERMANNIA. Theca 4-valved, supported on a peduncle longer than the calyx: valves free.

MARCHANTIA. Theca on the under surface of a common peltate pedunculate receptacle: anthers imbedded in the disk of distinct peltate pedunculate or sessile receptacles.

RICCIA. Theca spherical, immersed in the frond, (not opening) crowned with the style, which is alone protruded.

ORDER IV. ALGAE.

This order is constituted of the sea-weeds of the ocean, and of the floating scum-like substance of our ditches and rivers, called frogs spit-tle. Little is known of the functions, which what are called their reproductive organs perform: the nature and structure of these organs are so various as to render it improbable that they should all be destined for the same purposes. The bodies which are called sporules, are variously situated: now filling distinct thecae or even tubercles, which are either free or embeded in the substance of the frond; now appearing to be naked and surrounded by an involucre; now scattered or arranged in some determinate manner in the interior of the frond: the fronds are either cylindrical, or plane, sometimes little more than a mere membrane, sometimes hard and bony, and extended to the length of many feet. Many are articulated: their line of separation is then called a joint, and the space between two joints an articulation. Prof. Agardh defines the order thus, "aquatic plants destitute of cotyledons and of reproductive organs, gelatinous, membranous, or coriaceous; filamentous, lacunose, or even leafy; in color green, purple, or olivaceous; jointed or continuous; bearing sporidia (little transparent bodies, containing sporules, either included in pericarps, or scattered over the surface.) Many are considered by some botanists to be animalculae, and others to be the young seedling plants of mosses.

GENERA SELECTED FOR ILLUSTRATION.

NOSTOC. Individuals numerous, globular or filiform, suspended in gelatine of a definite form. Frog-eggs.

COSMARVA. Filaments jointed either externally or internally, separate, and not combined in any definite form.

ULVA. Frond membranous, continuous, tubular or flattened, never ribbed, herbaceous, rarely purple: seed heaped or scattered granulations.

FUCUS. Frond coriaceous, continuous, olive-green, flat or filiform: seed black in capsules, bordered or immersed.

ORDER V. LICHENES.

This, algae, and the collateral order Fungi, may be said to exhibit the lowest stage of vegetable developement, and to contain the simplest forms of which plants are susceptible. Indeed it seems that each is resolved into the other when in the least stage of composition. Of this order, the lowest tribe, Pseudo-Lichenes, are considered Fungi by

some authors, and have been formed into distinct order by others, under the name of *Hypoxyla*. Here it seems best to consider them Lichens. The fructification is usually in the form of stalks or cup-like receptacles, dispersed over the surface of the frond or thallus, and bearing various names according to their nature. Apothecia is the common term used to designate the fructification. Podetia are the stalk-like processes of the frond, which bear the apothecia on their summit. Scyphes are cup-like apothecia. Cyphellae are pale tubercular spots on the under-side of the frond. Lacunae are small hollows or pits, on the upper surface of the frond. Soredia are little heaps of free pulverulent bodies, mostly of a whitish color, placed on various parts of the frond. Pulvinuli are spongy excrescence-like bodies, arising from the frond and often resembling minute trees. Nucleus, or kernel is a distinct cartilaginous body coming out entire from the apothecia, and containing spores. Lamina is a distinct body, containing the spores separating from the apothecia, often very convex and variable in form, and mostly dissolving into a gelatinous mass. Apothecia differing in color from the rest of the plant, and formed of a distinct substance.

GENERA SELECTED FOR ILLUSTRATION.

GYROTHORA. Plant foliaceous, coriaceous, or cartilaginous, peltate, mostly monophyllous, free beneath. Apothecia sub-scutelliform, sessile, or adnate, covered with a black cartilaginous membrane; the disk warty or pruned on circles, or bordered.

LECANORA. Plant crustaceous, spreading, adnate, plane, uniform. Apothecia shield-like, thick, adnate, and sessile, the disk plano convex, colored; border thickish, somewhat free, formed from the crust, and the same color.

PARMELIA. Plant foliaceous, between coriaceous and membranaceous, spreading, appressed, orbicular, lobed, and stellate, variously divided, fibrous beneath. Apothecia shield-like, attached by a central point; the disk concave, colored, with a border formed from the crust.

BORRERIA. Plant cartilaginous, branched, and laciniate; the segments free, channelled beneath, and ciliate at the margin. Apothecia shield-like, with a colored disk; the border formed from the frond.

CERRARIA. Plant cartilagino-membranaceous, ascending, or spreading, lobed, smooth, and naked on both sides. Apothecia shield-like, obliquely adnate with the margin, the disk colored, plano concave; border inflexed, derived from the frond.

STICTA. Plant foliaceous, coriaceous-cartilaginous, spreading, lobed, free and pubescent beneath, with little cavities or hollow spots. Apothecia shield-like, fixed by a central point, the disk colored, plane; border formed from the crust.

PELTIDEA. Plant foliaceous, coriaceous, spreading, sub-adnate.

CESOMYCE. General receptacle sub-cartilaginous, foliaceous, lacinate sub-imbricated, free, (rarely adnate, uniform, or wanting.) Apothecia or podetia orbicular, immarginate, at length capituliform, bearing thick colored masses of fructification.

BLAEMYCES. Plant crustaceous, spreading, plane, adnate. Apothecia on short, soft, solid, simple podetia, capituliform, solid, emarginate, colored, convex, reflexed at the margin.

USNEA. Plant much branched, filiform, mostly pendulous, furnished

within with a bundle of elastic fibres. Apothecia orbicular, terminal, peltate, often ciliate at the border.

ORDER VI. FUNGI.

Fungi should be estimated as the lowest, in the scale of creation, of all organized beings. Some writers have even doubted their being any thing more than mere fortuitous developements of vegetable matter, produced by a kind of fermentation, or as a morbid oozing or swelling. The reproduction of mushrooms, for example, by sowing their laminae in garden beds, they consider as analagous to the production of warts on the hands of one person, by sprinkling upon them the blood taken from warts on the hands of another. From some passages in the writings of Fries, it would seem as if he considered the Algae, Lichenes, and Fungi, as consisting of the same beings, altered by the material on which they grow, and organized according to the different elements upon which they depend for support. Algae, he observes, (which are much extended in their native element, water) when exposed to the air, contract and become lichens. The proper situation for the growth of Fungi, is on dead vegetable matter—that of Lichenes, upon living vegetation. Bark, which when living bears lichens, bears fungi as soon as it begins to decay. The same may be sometimes observed even on the same branch or stem.

The number of Fungi, which may be conceived to exist, is incalculable. In Sweden, in the small space of a quarter of a mile square, Fries discovered more than two thousand species of Fungi; while the same ground supported but 420 phenogamous plants, and but 430 of both Lichens and Algae.

The essence of Fungi has been confined by authors, entirely to spores, disposed in series in elongated tubular cells—which cells are situated in some part of the external surface. The part in which the reproductive organs are placed is called *hymenium*—the hollow base from which the stipe arises is the *volva* or wrapper—the top or upper part is the *pileus* (cap or head)—under the pileus, within the head, or chief mass, are contained *sporules* enclosed in laminae, gills, or other parts of the more tender kind. Some Agarics have a delicate fringe, which had in a young state connected the pileus to the stem; this is called the *veil*, *ring*, *annulus*. Whatever immediately enwraps the sporules, is called *perisporium*, *perithecium*, *peridium*; also by some more particular names, as *laminae*, &c.

GENERA SELECTED FOR ILLUSTRATION.

AGARICUS. Having a pileus with lamellar seed-beds. *Sub-genera*—*Merulius*, has veins for seed-beds—*Daedalia*, lamellae so meeting as to form elongated pores.—(These are all called toad-stools.)

BOLETUS. Seed-bed tubular. Tubes separable from the pileus and from each other. Pileus always with a central stipe.

HYDNUM. Seed-bed subulate, subulæ loose.

CLAVARIA. Plants carnose, cylindrical, simple or branched. Seed-bed smooth, occupying almost the whole surface, confluent with stipes.

MORCHELLA. Pileus lacunose, confluent with the stipes either at the margin or a little above it. Seed-bed occupying the whole outer surface.

PEZIZA. Pileus mostly carnose, sessile or stipitate, more or less cup-shaped at length. Sometimes plane. Seed-bed occupying the disk.

ACINULA. Rootless, smooth, with a distinct farinaceous granular coat.

NIDULARIA. Common peridium simple, flocculent, furfuraceous, disappearing. Sporangia globose, with seeds in heaps in the middle.

SPHAERIA. Receptacle 0. Spherules sessile, or slightly immersed.

LYCOPERDON. Sporangium globose. Peridium single, membranaceous, scaly, with warts or soft spines bursting irregularly at the apex, and containing a mass of seeds and filaments.

BOVISTA. Sporangium globose. Peridium double; the outer one adnate, cracking, somewhat fugaceous; inner one bursting at the apex, and containing a mass of filaments and pedicellated seeds.

GEASTRUM. Globose, sessile. Involucrum coriaceous, stellate. Peridium membranous. Seeds on stalks from the first.

MUCOR. Peridium membranaceous, globose stipitate, pellucid, at length opaque. Pedicle simple or branched, tubular, articulated.

RACIDIUM. Thallus composed of branched, decumbent, interwoven, persistent, sub-opaque filaments, among which are sometimes granules of moniliform filaments.

ASPERGILLUS. Thallus composed of minute, pellucid, scattered or tufted filaments, apex of the main filament mostly clavate, on which is a head of (often beaded,) seeds.

GENERA, having some species, which depart from the class or order to which most of the species belong.

Directions.—After tracing a plant through the class and order in which its artificial character would place it, and finding no generic description agreeing with it; try it through the class and order to which one or more of these anomalous genera will refer it, by the alphabetical arrangement of the genera, where the species are described.

Anomalous or straggling genera.

CLASS I. ORDER I. Scirpus. Cyperus.

ORDER II. Uniola. Saccharum.

CLASS II. ORDER I. Salicornia. Cunila. Schoenus. Scirpus. Verbena. Hedeoma. Senna. Crypta.

ORDER II. Holcus. Festuca. Saccharum.

CLASS III. ORDER I. Juncus. Galium. Oryzopsis. Queria.

ORDER II. Zanthoxylon. Stellaria. Eriocaulon. Queria.

CLASS IV. ORDER I. Convallaria. Cardamine. Prinos. Calymenia. Euonymus.

ORDER II. Sanguisorba. Cuscuta. Swertia. Oldenlandia. Gentiana. Morus. Juglans. Thuja. Galium.

ORDER IV. Proserpinaca. Myriophyllum.

CLASS V. ORDER I. Queria. Prinos. Polygonum. Ledum. Gentiana. Cassia. Passiflora. Lycium.

ORDER II. Polygonum. Scleranthus. Salix. Quercus.

ORDER III. Polygonum. Arenaria. Hypericum.

ORDER V. Spergula. Cerastium.

CLASS VI. ORDER I. Trientalis. Laurus. Lythrum. Corydalis. Polygonum.

CLASS VII. ORDER III. Polygonum.

CLASS VIII. ORDER I. Aesculus. Vaccinium. Gaultheria. Polygala. Populus.

ORDER II. Myriophyllum.

CLASS IX. ORDER III. Lechea.

CLASS X. ORDER I. Geranium. Betula. Jeffersonia. Asclepias. Portulacca.

ORDER II. Chrysosplenium. Quercus.

ORDER III. Castanea. Acalypha. Jatropha.

ORDER V. Portulacca. Geranium. Drosera.

CLASS XII. ORDER I. Jeffersonia. Taxus.

ORDER XIII. Zostera.

CLASS XIII. ORDER I. Lycopus. Monarda. Salvia. Collinsonia. Linnaea.

ORDER II. Catalpa. Gratiola. Elytraria.

CLASS XV. ORDER V. Anagallis. Lysimachia. Linum. Peltostemon.

ORDER VIII. Polygala. Cardiospermum.

ORDER X. Oxalis.

ORDER XIII. Pinus.

CLASS XVI. ORDER V—VIII. Gleditschia.

ORDER X. Baptisia. Cercis. Virgilia. Cassia.

CLASS XVIII. ORDER V. Asclepias. Acerates. Apocynum. Passiflora.

ORDER X. Calla. Arum. Zostera.

CLASS XIX. ORDER VI. Celtis. Veratrum. Quercus. Betula.

CLASS XX. ORDER V. Vitis.

ORDER VI. Helonias.

APPENDIX TO THE GENERA.

Refer to the following with the pen, from the page &c., set down here.

Page 28, to follow *Stipularia*.

POLYCHNEMUM. Calyx 3-leaved: petals calyx-like: capsule 1-seeded, membranous, not opening, covered by the calyx. Stamens 1 to 5. S.

Page 29, to follow *Spartina*.

VAGINARIA. Spike ovate, calyx-like scales imbricated on all sides, acuminate: corol 0: stigmas 3: seed surrounded at the base with 3 scales and three bristles. S.

Page 30, to follow *Stipa*.

PIPTARTHERUM. Calyx membranous, longer than the corol, which is cartilaginous and oval: lower valve awned at the tip: nectary ovate, entire: seed coated.

ARISTIDA. Calyx 2-valved, membranous, unequal: corol 2-valved, pedicelled, sub-cylindric; lower valve coriaceous, involute, 3-awned at the tip; upper valve very minute or obsolete: nectary lateral.

Page 31, to follow *Trichochloa*.

ARUNDO. Calyx 2-valved, unequal, membranaceous, surrounded with hair at the base; lower valve mucronate or awned.

Page 34, to follow *Arundinaria*.

ERIOCOMA. Calyx 2-valved, 1-flowered; valves gibbous, larger than the corol, 3-nerved, cuspidate: corol coriaceous, woolly; outer valve awned.

DICHROMENA. Spike in a head, involucre: scales imbricated all sides: corol 0: seed sub-lenticular, rugose, tipped with permanent style.

Page 34, to follow *Mollugo*.

MONTIA. Calyx 2-3-leaved: petals 5, sub-connate at the base, 3 smaller: stamens on the claws of the petals: capsule 1-celled.

Page 36, to follow *Ptelea*.

KRAMERIA. Calyx 0: corol 4-5-petalled: nectary 4-leaved: drupe prickly.

Page 37, to follow *Ilex*.

NEMOPANTHUS. Calyx scarcely perceptible: petals 5, sub-linear, caducous: germs hemispheric: style 0, stigmas 4: berry 4-celled.

Page 42, to follow *Gentiana*.

CUSCUTA. Calyx 4 or 5-cleft: corol 4 or 5-cleft, somewhat bell-form, withering: capsule 2-celled: seeds binate.

Page 44, to follow *Conium*.

ATREMA. Calyx 5-toothed: petals emarginate, division inflated: fruit sub-globose, with 5 prominent ribs.

DISCOPLEURA. Calyx with 5 subulate teeth: petals ovate, entire, folded at the apex: fruit ovate, 5-ribbed; seed teretish.

Page 45 to follow *Heraclium*.

POLYTAENIA Calyx 5-toothed: petals oval, emarginate, divisions inflexed, fruit oval, compressed, smooth, margin tumid, having a pair of dorsal fillets between the seeds.

TREPOCARPUS. Calyx with five subulate teeth: petals obovate, with inflexed margins: fruit angular pyramids, filletted within.

Page 48, after *Floerkea*.

CLEOME. **POLANISIA**. Calyx 4-leaved inferior: petals 4, ascending to one side: a gland at each subdivision of the calyx, but the lowest: stamens 6 to 20 or more: capsule silique-like. May be known by its nauceous odor.

Page 71, to follow *Dolichos*.

GALACTIA. Calyx 4-toothed, 2-bracted: petals oblong; banner incumbent: stigma obtuse: germ stiped: legume terete: seeds roundish, numerous.

Page 75, to follow *Bidens*.

POLYPTERIS. Calyx many-leaved, spreading, with colored leaflets: receptacle naked: egret chaffy, about 12-valved.

Page 85, to follow *Ceratiola*.

BORYA. Staminate flowers—calyx 4-leaved: corol 0: stamens 2 or 3. Pistillate flowers—stigma capitate: berry 1-seeded. S.

ABBREVIATIONS

FOR

SPECIFIC DESCRIPTIONS.

N. B. *Students must often read these abbreviations, words, and explanations, to the teacher. This exercise will aid them in pronunciation, meaning of words, and the abbreviations.*

- a—acu'te: terminating in an angle.
- ab—above': upper side or end, uppermost.
- abr—abor'tive: not producing ripe fruit.
- ac—acu'minate: a point inclining to one edge; an abrupt point.
- ag—ag'gregated: heaped, several united.
- al—alter'nate: one above another on opposite sides.
- am—a'ment: having a series of scale calyxes, on a rachis.
- an—an'gle: lateral ridges, or terminating points.
- ap—appress'ed: as if closely pressed together.
- apx—approx'imate: near, approaching.
- ar—ar'rowform: having acute hind lobes; not heartform.
- arm—armed: having spines, bristles, &c.
- as—ascen'ding, assur'gent: rising in a slope.
- au—au'ricled: having ear-like processes.
- av—alve'olate: honey-comb like; pitted.
- ax—ax'il, axillary: meeting of leaf and stem; arm-pit-like.

B.

- b—beard: parallel coarse filaments; tendril-like.
- bar—barren: not producing ripe seed.
- be—bene'ath: below, inferior, under side.
- ber—ber'ry, berry-like: as the calyx of wintergreen.
- bl—bell'form: shape of church bell.
- br—broad, broader than: wider than midling.
- brh—branch: a limb of a tree, weed, &c. branching.
- brs—bris'tle: stiff, strong hair.
- bt—bract: leaf adjoining a flower, and of peculiar form.
- bu—bulb, bulbif'erous: root-like buds; as of onions, lilies.

C.

- c—ca'lyx: leaf-cup of a flower.
- ca—ca'ryophyl'lous: pink-like.
- cap—capil'lary: thread-like, hair-form.
- cau—cau'line, caulis: (stems not of grass) as of trees, grapes,
- ces—ces'pitose: growing as in turfs; many together.

ch—chaff, chaffy: like chaff or husks.
 cil—cil'iate: resembling eye-lashes; hairy edges of leaves.
 cl—co'lored: not green.
 cli—climbing: ascending on various supports.
 cls—clasp'ing: closing partly around stem.
 cm—campan'ulate: bell-form.
 cmb—co'rymb: umbel-like at top only, unequal below.
 cn—con'nate: growing base to base.
 co—corol: colored blossom.
 com—com'pound: several florets, or leaves, united.
 cor—cor'date: heart-form.
 cp—compress'ed, close-prest, compact: as if squeezed together.
 cps—cap'sule: common dry pericarp, mostly opening by valves.
 cr—coria'ceous, cartiligenous: tough and strong, leathery.
 crd—crow'ded, confert: in a dense heap.
 cre—cre'nate: with roundish notches.
 crp—creep'ing: rooting and running on the surface.
 cru—cru'ciform: position of flowers cross-form.
 cs—cus'pidate: sharp-pointed.
 ct—cap'itate: head-form, in heads.
 cu—cu'neiform: wedge-form, pointed at the stem.
 cv—conni'ving, conver'ging: approaching.
 cy—cyl'inder: elongated and roundish.

D.

d—down'y: covered with soft hairs.
 dc—de'cliv' bent, declined: lying down, bent downwards.
 de—decur'rent: leaf running down the stem at its edges.
 dec—de'compound: doubly compound.
 dg—dig'itate: finger-shaped.
 di—divis'ion, divided: any sections of leaves or other organs.
 dic—dichot'omous: forked.
 die—dioe'cious: stamens and pistils on different plants.
 div—diverg'ing: spreading gradually.
 dk—disk, dis'coid: as the middle of sunflowers.
 dn—dentate: indented, toothed.

E.

e—erec't: standing upright.
 ec—ech'inate: prickly, like hedgehog.
 el—elon'gated: lengthened out.
 em—emar'ginate: notched in the end.
 en—enti're: not notched.
 eq—e'qual: all parts agree.
 ex—exsert': sticking out, projecting.

F.

f—flow'er: whether complete or not.
 fal—fal'cate: one-edged sword.
 fas—fas'cicle: a bundle.
 fer—fer'tile: ripening fruit; producing ripe seed.
 fi—fil'ament, filiform, fibrous: thread-like.
 fl—flex'uose, flexible: zigzag, bending.

fr—frond: leaf and stem united.
 frg—feru'ginous: russet-color; reddish yellow.
 fru—fruit, fruc'tifica'tion: fruit-bearing organ.
 fs—fasti'giate: level top;
 fun—fun'nel-form: shape of a tunnel.
 fur—fur'row: a strong groove.
 fu—fu'siform: spindle-shaped.

G

g—gla'brous: sleek, often shining.
 gh—gash, gashed: divided as if cut.
 gl—glau'cous: seagreen mealiness.
 gld—gland, glan'dular: roundish masses.
 glin—glom'erule: united in roundish heaps.
 glo—glo'bose, glob'ular: sub-spheroid.
 glu—glume, glum'a'ceous: chaffs, husks.
 gm—germ, germina'tion: seeds rudimental or growing.
 gui—guitar-form: oblong, with contracted sides.

H

h—hair'y: more or less covered with hair.
 hd—head, head-form: somewhat spherical.
 hem—hem'isphere: half a sphere.
 her—herba'ceous: not woody.
 hir—hir'sute: rough-haired.
 his—his'pid: with prickly hairs.
 hr—heart-form: shape of heart spots; not arrow-form.
 hy—hy'pocraterafor'mis: salver-form.

I

i—in'fundibilifor'mis: tunnel-form.
 im—in'bricate: like a shingled roof.
 in—infe'rior: below, under.
 inc—incis'ion: sharp cut or gash, in appearance.
 inf—infla'ted: as if blown up.
 int—interrup'ted: large and small alternating leaves, &c.
 inv—involu'cre: a leafy calyx at a distance below the corol.

K

k—kid'ney-form: called reniform.
 ke—keel, keeled: having a keel-like base.

L

l—leaf, leafet, leaved: most spreading part of herbage.
 la—la'biate: like lips of some animals.
 le—legu'me: pea pod-like, having no partition lengthwise.
 lg—length, longer than: used in comparison.
 li—lin'ear: long, with nearly equal width.
 ll—lilia'ceous: like lily flowers.
 ln—lanceo'late: shape of Roman lance.

- lr—large, larger than: used in comparing.
 lo—lo'bed, lobe: divided into roundish parts.
 lt—lat'eral: on one side; or one-sided.
 ly—ly'rate: pinnatifid, with a large end division.

M

- m—mu'ricate, mucronate: covered or tipped with prickles.
 mo—monoe'cious: in two flowers, on the same plant.
 mr—margin: edge of leaf, &c. sometimes thickened.
 my—many: more than 4, or than usual.

N

- n—nerve, nerved: with fibres from the base, spreading outward.
 na—na'ked: without usual covering; as of capsule, hairs, leaves.
 ne—nec'tary: organs bearing honey; or unusual organs in flowers.
 no—nod'ding: bending down; not upright.
 nr—nar'row, narrower than: used in comparison of organs.
 nm—numerous: many, more than 4.
 nu—neu'tral: neither stamens nor pistils in the floret.

O

- o—o'vate: egg-shaped; form of an egg split lengthwise.
 ob—obo'vate: egg-shaped, pointing to stem with its small end.
 oc—obcor'date: heart-form, pointing to stem with its small end.
 ol—ob'long: lengthened, edges parallel, or nearly so.
 os—ob'solete: as if worn out in general appearance.
 ot—obtu'se: rounded at the end.
 op—op'posite: base against base; applied to leaves, &c.
 or—orbic'ular: somewhat circular.
 ov—o'val, an ellipse in general form.

P

- p—pis'til, pistilate flowers: the central organ, or having no stamens.
 pa—pair, paired: two and two.
 pal—pal'mate: hand form.
 par—partition, parted: separation in capsules, corols, &c.
 pd—pe'duncle: flower stem, not a scape.
 pe—pe'tiole: leaf-stem.
 ped—pe'date: like a bird's foot.
 pel—pel'tate: shield-like by position of stem.
 pen—pentan'drous: 5-stamened.
 per—per'fect flowers: having stamens and pistils.
 ph—pe'rianth: calyx adjoining corol, or stamens.
 pk—prickly: covered with prickles.
 pn—pan'icle—as oats in flower, and red-top grass.
 pnd—pen'dant: hanging down.
 pnt—pin'ate, pinnatifid: appear as if pinnate, or winged.
 pol—pol'ygam'ous: monoecious, dioecious, and perfect.
 pr—pe'ricarp: organ enclosing seed, as capsules, pods, &c.
 prf—perfo'liate: through the leaf.

prt—pros'trate, procumbent: lying on the ground.
 pt—pe'tal: leaf of corol.
 pu—pubes'cent: hairy.
 py—pyr'amid: top-shaped, with the apex upwards.

Q

q—qui'nate: in fives, 5-parted.

R

r—race'me, racemed: as a bunch of currants.
 ra—ray-floret, rayed: as edging of sunflowers.
 rac—ra'chis: as the receptacle of wheat-heads.
 rad—rad'ical: from the root.
 ram—ramo'se: branch, branching.
 rc—recurved: bent, or curved backwards.
 rd—round: somewhat globular.
 re—retu'se, repand: notched or indented at the end.
 rec—receptacle: end of a peduncle, or other fruit-stem.
 ren—re'niform: kidney-shape.
 rh—rhomb'oid: diamond-shape.
 rg—rugo'se, rugged, rough: harsh to touch.
 rn—ringent: grinning.
 ro—root, rooting: the supporting base; rooting as it runs.
 rt—remote: distant.
 run—run'ciate: lion-toothed, as dandelion leaf.
 rx—reflex'ed: bent backwards.

S

s—sta'men, stam'inate flower: having no pistil; fertilizing organs.
 sab—sa'breform: like a one-edged sword.
 sb—sub'ulate: awl-shaped.
 sc—scattered: in no regular order.
 sca—sca'brous: scaly roughness.
 scp—scape: radical flower-stem—proceeding from the root.
 se—seta'ceous: bristle-form.
 seg—seg'ment: a part divided off.
 sg—sprouting, shooting, sarment: sending off shoot.
 sh—short, shorter than: used in comparison.
 she—sheath, sheathing: as base of grass-leaves.
 si—sim'ple, single: only one.
 sin—si'nuate: rounded divisions.
 sk—spike, spikelet: florets on a rachis, or elongated receptacle.
 sl—sol'itary, single: one alone.
 sm—sometimes, somewhat: not perfectly.
 sml—small, smaller than: used in comparison.
 so—smooth, smoothish: not generally sleek.
 sp—spine, spinose: thorny; having woody spines.
 spa—spathe, spathaceous: membranous, calyx below the flower.
 sph—sphe'rical, spheroid: globular or rounded.
 spr—spreading: branching off, rapidly diverging.
 spt—spat'ulate: like a case knife, wide at the end.
 sr—ser'rate, serrature: like saw-teeth.

- st—stem, stalk: a culm, caulis, &c.
 ss—ses'sile: without any stem.
 stg—stigma: tip of the pistil.
 sti—sti'pule: peculiar leaf at bottom of petiole.
 sub—somewhat, a little: used to diminish.
 suc—suc'culent: thick and juicy.
 sup—supe'rior: above, or on the top of.

T

- t—tere'te: tapering.
 ta—ta'pering; same as terete.
 ten—ten'dril: a fibrous climber.
 ter—ter'nate: in threes.
 th—thorny, thorn: woody spires.
 tm—ter'minal: at the end or top.
 to—tooth, toothed: notched irregularly.
 tom—tomento'se: cottony.
 tri—trian'drous: 3-stamened.
 tru—trun'cate: as if cropped off.
 tu—tur'binate: top-shaped.

U

- u—um'bel: umbrelly like; peduncles from one place.
 un—under: below, under side.
 up—upper: uppermost, upper side.

V

- v—villo'se: soft hairy.
 va—valve: chaff, side of capsule.
 ve—veiny: branching fibres of leaves.
 vo—volu'te: rolled.

W

- w—without, wanting, not, none: universal negative.
 wd—wedge'form: wedge pointing to stem.
 wh—wheel'form: border without tube.
 wi—wing, winged: spreading on opposite sides.
 wr—whorl: surrounding stem, whether leaves or flowers.

N. B. All the words abbreviated are to be used as nouns, adjectives, participles, &c. according to the sense.

SPECIES OF NORTH AMERICAN PLANTS,

ARRANGED ALPHABETICALLY BY THE GENERA.

ACA'CIA. 15—10. 93. Gr. *akakia*, from akazo to sharpen.

1 *farnesia'na*, y. ♀. sp: 1 2-pn; lt 8-pa: sk glo, ss. le fu. 10 f. S.

2 *lu'tea*, y. Ju. 2f. unarm, g: 1 2-pnt: 1 nm, ol-li: sk sub-glo, sl: pd ax, lg: le ob. lr.

3 *cool'eyi*, w. 2f. 1 bipnt, le li, el, so: sk ct.

ACAL'YPHA. 19—15. 96. Gr. *a* not *kalos* agreeable and *aphe* to touch.

1 *virginica*, O. g. Au. ☼. h: p at base of sk: inv hr-o, ac, to: 1 sh-po ln-ol, re obt sr. 10 i.

2 *car'oliniana*, O. g. Ju. 2f. 1 ln ov, ac, lg-pe, a sr, n, cor at base: fru brh na: cps ec. 18 l.

ACER. 8—1. 66. Lat *acer* hard or sharp, for pikes.

1 *rubrum*, red maple, O. r. Ap. ♀. pal, 5-lo, cor, uneq gh-to, gl be, inc between lo a: f, ss u, lg pd; gm g. 50 f.

2 *da'sycarpum*, white maple, O. g-y. Ap. ♀. 1 pal 5-lo, tru, uneq gash-to, g gl be, ob sin: glm; ped short: gm d. 50 f.

3 *barbatum*, hairy maple, w-g. Ap. ♀. l. hr-o, short 3-lo, uneq sr, gl be, h n: pd h, s brh, psi: c b within: wings of cps e. Small 15 f.

4 *sachari'num*, sugar maple, O. r-y. M. ♀. 1 pal-5-lo, sub-cor, ac, obt sin, to, g be: no cmb. 50 f.

5 *ni'grum*, black maple. y. Ap. ♀. 1 pal 5-lo, cor sin base closed, lo spr, sm sin-to, d be: f cmb: cps turgid, sub-glo. 50 f.

6 *striatum*, striped maple, O. g. M. ♀. lower l rnd, upper 3-cs a, sr, g: r si, pnd. 15 f.

7 *spicatum*, mountain maple O. A. y-g. M. ♀ 1 sub-5-lo, a, to, pu be: r com, e. 15 f.

8 *negundo*, ash maple, M. ♀. 1 pin ter, uneq sr. F di. 40 f.

9 *macrophyllum*, g-y. Ap. ♀. 1 dg 5-lo; sinus rnd, lo sm 3-lo, rep to, h be: r e: fil 9, hir. 40 f.

10 *cir'cina'tum*, l or, sub-cor 7-lo, uneq a-to, g both sides, n ve h ax.

11 *glabrum*, 1 rnd, 5 7-lo, tr lo a to, g both sides: cmb ped: fru g. o o div wings.

ACER'ATES. 18—5. 47. Gr. *a* without and *keras* horn.

1 *vir'idiflo'ra*, green milkweed. E. g. Ju. 2f. st si, e, hir; 1 ln-obg, obt, sub-ss, d-hir both sides; u lat, sl, sub-ss, no, sub-glo, dense f: no horn in ne. Dry. 3 f.

2 *lan'ceola'ta*, g. Ju. 2f. s dc, hir: 1 ln, a, sub-ss: u hir, lt, sl, ss, sub-glo, dense-f, no: no little horn in ne. Dry sandy. 30 i.

3 *lon'gifo'lia*, w-r. M. 2f. st dc: l al, li: u lat, e: ne short: no little horn in ne. 2 f.

4 *nuttall'ia'na*, 2f sinl, de, hir: l ol, o, sc, short pe: u ter: ne en, cp: pol len short: no horn in ne. 6 i.

5 *obovata*, 2f. l ob, obt, in, toin un: u sub-ss, ter ax. 2—3 f. Yarrow.

A'CHILLE A. 17—2. 55. From a Greek physician, Achilles.

1 *mill'efo'lium*, O. w. J. 2f. l 2-pin. d: di li, to, m: c st fur. 15 l.

2 *ptarmica*, sneeze-wort. w. Au. 2f. l li, ac, eq s, g. Damp. 15 i.

3 *setacea*, w. Ap. 2f. l bipin: l se-li, m, pilose, era: cmb com, fs. 18 i.

4 *tomentosa*, y. J. 2f. l 2-pin. v; di cr, ln-li, en: cmb com.

5 *asplenifolia*, r. J. rad l 2-pin, cau gh di o, sr-in ob.

ACHYRAN'THES. 15—5. 30 Gr. *achuron* chaffy and *anthos* a flower.

1 *repens*, forty knot. 2f. st prs, h; l op, pe, ln: f ss o ax hd.

2 *ficoi'dea*, Ju. 2f. st crp, g: l br-ln, pe: f sph, pu hd.

ACMELLA. 17—2. 55. Gr. *acme* point.

1 *repens*, y. S. 2f. st crp: l ln-o, to, 3-n, sub-pu: pd ax ter, lg, 1-f 18 i.

2 *oc'cidenta'lis*, st crp, sub-pu: l o, cre, os 3-n, so, pe: pd ax, c minute. 3 i.

ACNI'DA. 20—5. 29. Gr. *a* without and *knide* a nettle or sting.

1 *can'nabi'na*, water hemp. L. w-g. Ju. ☼. l ln: cp so, a-an. Damp. 3 f

2 *ruscocar'pa*, w-g. Ju. ☼. l ln-ov: cp rg, ob-an. Damp.

ACONITUM, 12—5. 61. Gr. *akone* a cliff or rugged rock.

1 *uncina'tum*, monk's hood. b. J. 2f. st fl: l pal, 3-5-par: di rh-ln, gh-to: up lip lg, beaked. 2 f.

2 *napellus*, wolf's bane. b. J. 2f. l 5-par; di 3-par gh inc, sub-di ln: up lip ln, as, 2-cleft; spur strait, ot. 2 f.

3 *nostrum*, nec e, spur arched: helmet conic, beak no: r sub-pn: di l br.

A'CORUS, 6—1. 7. Gr. *a* without and *kore* the pupil of the eye.

1 *cal'amus*, sweet flag, O. g-y. J. 2f sk protruding from sep. Water. 2 f

ACROSTICHUM, 21—1. 5. Gr. *akros* highest and *stikos* order.

1 *aureum*, Ju. 2f. fr pnt: l sti, bases wd, ln-ol, en, ac; up fru. 4 f.

ACTAEA. 12—1. 61. from Acteon a hunter of antiquity.

1 *rubra*, O. w. M. 2f. pt sh s, a: pd w lr. Ber red. 2 f.

2 *alba*, O. w. M. 2f. pt cqs, tru: pd ol r lr as general pd, l dc. 2 f.

3 *po'docir'pa*, 2f. gm 4-5, g, r pn: l dc.

4 *cordifolia*, 2f. gm 2-3, g, ss: r pn. l in threes; seg cor at base, 5 to 7-lo, sr.

ACTINEL'LA, 17—2. 55. A diminutive of Actinea, of *aktin* a ray.

1 *lana'ta*, y. J. 2f. d l li, pnt ab: pd cl, 1-f: r 2-to: seed g, 5-an.

2 *acau'lis*, y. J. 2f. h sep 1-f, na: l li-spt, en: ry 8 to 10: ch of egret 5 to 7, o, sh-awned. 6 i.

ACTINOMERIS. 17—3. 55. Gr. *aktin* a ray and *meris* part.

1 *squarro'sa*, w. y. 2f. st e, winged, pu and pn ab: l ln, sr, sca: c spr, loose: rec sub-glo,

2 *helianthoi'des*, y l ln, a, sr, un v: cmb si, cp. wi.

3 *alata*, l o, ac, sr, 3-n, op, de.

4 *pauciflora*, si? l ol ol-o, sr, dec: pd few-f, lg na.

ADIAN'TUM, 21—1. 5. Gr. *a* not and *diaino* to moisten.

1 *pedatum*, maiden hair. O. J. 2f. fr ped, pn brh: l halved; up mr gh bar seg to, fer en: s g.

ADONIS. 12—13. 61. From Adonis the favorite of Venus.

1 *autumna'lis*, pheasant's eye. Au. ☼. f 5 8-pt: fru sub-cy: pt em. E.
ADOX'A. 8—4 84. Gr. *a* not and *doxa* glory.

1 *moschatel'lina*, g. pd 4-f: fi in pa at base: anth rd. S.

AE'GILOPS. 3—2. 10. Gr. *aigos*, goat and *ops* appearance.

1 *hystrix*, 2f. sk with lg rc awns; c so, 4-par to base: seg 2-cleft, uneq
2-awned: sk 4-f, va of co tm by 2 or 3 uneq awns. 6—8. i.

AESCHYNOM'ENE. 16—10. 93. Gr. *aichanomai* to be bashful.

1 *hispida*, y-r. Ju. ☼. s pe his: 1 in m pa; 1 li, ot: r si, few-f: 1 his.

2 *viscid'ula*, y. 2f. st prt, viscid-h: 17 or 9 ob: pd 2-f: 1 h. 3 f. S.

3 *glaber'rima*, g: st e, t: 1 li. 30—35 pa: pd few f: le g, pte; 12 jt.

AE'SCULUS. 7—1. 66. Lat. *esca* food. Horsechesnut. 2.

1 *glabra*, y. w. 2. 1 in fives, g: co 4-pt, spr; claws 1 a c: s lg co.

2 *hippocastunum*, r. y. w. J. 2. cap pk: co 5-pt: 17, wd-ob, a, to; f. pte. 2.

3 *obicon'sis*, w. 2. cps pk: 15, ov-ac, to g: f nm, r. Buck-eye.

4 *pallida*, 2. cps pk: co 4-pt, spr: claw sh c: s twice lg as co: 15.

PA'VIA. S. G. Lat. peacock, from its ocellate feathers.

1 *macrosta'chya*, w. Ap. 2. s. lg 4-pt co: r very lg: 15. S.

2 *rubra*, b-r 2. s sh than 4-pt co: 15, ax of n h be.

3 *hybrida*, w-r. 2. s sh than 3-pt co: pt g: 15, ol-ov, ac at ends pu.

4 *flava*, w. y. 2. s sh 4-pt co: pe h, 15 to 7, ol, a at both ends; n h.

5 *dis'color*, w. y. r. M. 2. 1 in 5 di, ac at each end, d be. 4 f.

6 *lutca*, y. March. 2. 1 in 5 di, h; 4-pt claws lg c.

AETHUSA. 5—2. 60. Gr. *aithousa*, beggarly. Foolparsley.

1 *divaricata*, w. ☼. st e, 1 biter; seg li: u tm, w inv; u 3 to 5 f. fru his.

2 *leptophyll'a*, r. w. ☼. 1 biter, gh; m of a seg en: u 3-par, ss; u na, few-f.

3 *pinnat'a*, 1 cut pnt; seg in few pa, li, en, tm one very lg: fru ol.

4 *cynapium*, 1 all pnt: 1 pnt, shining.

AGARICUS. From Agarica, (a city in Sarmatia.) Mushroom.

1 *procerus*, br d fleshy, bossed scaly, reddish-as h cl lamellae rt white
stipe bu lg, ring movable.

2 *campestris*, pileus fleshy, with scales dark yellow: lamella yellow red;
stipe sh. Eatable museroon.

AGA'VE. 6—1. 15. Gr. *agavos*, admirable.

1 *virginica*, y-g. S. 2f. w. st: 1 with cr sr: sep si.

AGRIMO'NIA. 11—2. 92. Gr. *agros* a field and *monos* alone.

1 *eupato'ria*, O. y. Ju. 2f. cau l int pnt, the tm l pe: fru his.

2 *parviflo'ra*, y. Ju. 2f. cau l pnt: 1 ln, sr: tm ss; pt lg c.

3 *striata*, 2f. sk wand-like- fru rx, tu, fur; at the apex crowned his.

4 *suavcolens*, y. Ju. 2f. st his l int pnt; 1 nm, sca ab, and pu be 5 f.

A'GROPY'RON. 3—2. 10. Gr. *agros* a field, puros wheat. Quack-grass.

1 *repens*, O. J. 2f. ol, 5-f: glu sb, my-n: f ac: ro and st cr. 2 f.

2 *caninum*, 2f. sk 3 to 5-f, cp: glu 3 to 5-n, brs: f brs at tip: ro fi. 2 f.

A'GROSTEM'MA. 10—5. 82. Gr. *agros* field *stemma*, garland.

1 *githago*, O. r. J. ☼. hir: c lg co: pt en. Cockle.

2 *corona'ria*, rose champion. Au. 2. tom: 1 ln-o: pt em. E.

AGROS'TIS. 3—2. 10. Gr. *Agros* a field. Red-top, bonnet grass.

1 *stricta*, J. 2f. pn el, ceq: co sml than c, va, w-eq base awned.

2 *vulga'ris*, O. J. 2f. pn so brh, spr va of co 3-n: sti sh, tru. 18 i.

3 *alba*, O. J. 2f. pn his, spr br: va of co 5: sti ol. 18 i. fiorin.

4 *l'eriflo'ra*, Au. 2f. culm e, br ab, pn lt and tm: c ac, co lg c, eq, h
at base. Ro cr. 2 f.

- 5 *sobolifera*, Au. 2f. st sg sm de at base; brh cp: co lg eq c, h at base.
 6 *tenuiflora*, Ju. 2f. culm si, h at jt brh cp, sti os; co lg c.
 7 *sylvatica*, A. 2f. culm e, brh, so g? pn fi brh: co lg c: awns 3 lg.
 8 *compressa*, 2f. g: culm c, cp, si: pn ol, c eq, sh co, a. St sg. 18 i.
 9 *serotina*, 2f. culm fi, cp: l nr, ke, c: brh cap, e, al brh: c uneq, half lg co. 18 i.
 10 *junccea*, Oc. 2f. l e, se, convo: pn lg-py wr: c half lg co. 2 f.
 11 *virginica*, 2f. culms sub-ces, nm, prt base as ab: l dic, invo, rigid: pn lt tm, sk lt: c with eq va eq co. No sti.
 12 *longifolia*, 2f. pn sk, co lg c, sub-cq, g, l fi, lg re tip. 3 f.
 13 *clandes'tina*, 2f. pn sk, co uneq, lg c, h: sti b. 2 f.
 14 *spica-venti*, bent-grass. J. ☼. pn spr: awn of outer pt stifly e, lg.
 15 *canina*, Ju. 2f. culm pr, sub-ram: c cl: pt re awns on backs.
 16 *arachnoides*, Ap. 2f. st e: pn lg, c lg co; outer pt web-like awn. 6 i.
 17 *trichopodes*, pn lg, cap: va coeq; outer with sh awn: l li, flat. 3 f.
 18 *dispar*, e, lg: pn loose, in wr py, ny-f: glu, w awn, va inner sml.
 19 *pauciflora*, Ju. 2f. pn fi, l-f brh: co awned, lg uneq c, hir: she v. 18 i.
 20 *cryptandria*, J. pn py spr, sub-al brh, h at ax: f sub-r va of c sh; up lg eq co: she b at throat. 3 f.
 21 *leioides*, T. pn py, brh sm in pa, spr; na ax: f sl, w arm; glu uneq, sheq co: she b at throat.
 22 *caespitosa*, culm brh, l invo, sub-dic, pn cp: f awned. 4 i.
 23 *brevifolia*, l sh cp ces culms: pn al, cp r: c eq, half as lg as co. 1 f.
 AI'RA. 3—2. 10. Gr. deadly instrument.
 1 *flexuosa*, O. J. 2f. pn spr, brh fl: c sh f, lg awn: l se: culm na. 20 i.
 2 *caespitosa*, J. 2f. pn spr: f lg c: awn sh, l flat. 18 i. Wet.
 3 *aristulata*, Au. 2f. pn cap, spr: brh wr fl: c 2-f, sh f: sup f pd.
 4 *pumila*, J. 2f. pn sml, fs, few-f: pd sh: f awnless, ot lg c, in va.
 5 *capillacea*, pn cap lr, f w awn, lg c: one on foot-st. 8 i. S.
 6 *obtusata*, M. 2f. l flat: pn cp: f so, ot; va of c tru.
 7 *aquatica*, 2f. pn spr half wr: f w b, ot, so, lg c: l flat: culm crp.
 A'JUGA. 13—1. 42. Gr. a privative and *zugon* a yoke, not paired.
 1 *cha'mae'pithys*, y. J. ☼. l 3 fid: f ax, sl, sh l: st div.
 ALCHEMIL'LA. 4—1. 92. Celebrated by the alchemists.
 1 *alpina*, w. 2f. l dg sr, white bc. Ladies mantle.
 ALE'TRIS. 6—1. 16. Gr. *ac'liar*, meal. False aloe.
 1 *farinosa*, y. 2f. w t ☼. s: l li-ln: sep al pd.
 2 *aurca*, y. Ju. 2f. f sub-ss, sh, sub-cm; fcr co rg, very sca: l ln a.
 ALISMA. 6—13. 13. Celtic, *alis*, water. Water plantain.
 1 *planta'go*, O. w. Ju. 2f. l o or hr-o, ot ac, 5 to 9-n: f wr.
 2 *natans*, Ju. 2f. l o, ot: pd sl.
 ALLIO'NIA. 4—1. 34. Allioni, an Italian botanist.
 1 *albida*, Ap. ☼? l op, ol-ln, sub-sca: pd op, sl and glm inv 5-cleft.
 2 *nyctagyn'ia*, Ju. 2f. st e: l br-cor, a, g: pd sl: fru c sub-hir, sml br inv.
 3 *orata*, Au. ☼. st, dic: l o, sca or na: f tm, fas-r: inv half 5-cleft; di rd, a, net-ve.
 4 *linearis*, st e, t: l li, sub-fleshy: f r; pe ag: s very ex.
 5 *hirsuta*, st e, an: l ln, n, hir both sides: c hir, sub-3-f.
 6 *multiflora*, pu: l br-cor, a, in, inv 7 or 8-f, 5-cleft: f sub-pen: s ex, flr.
 AL'LIIUM. 6—1. 16. Gr. *aleo* to avoid. Garlic, leek, onion.
 1 *canaden'se*, 2f. sep na, t: l li: hd bu. Meadow garlic.
 2 *vineale*, p. J. 2f. cau l rd, u bu: s al 3 celled.
 3 *triflorum*, 2f. sep n, t, sh than l: l ln, n: u few-f.

- 4 *cer'nuum*, r. Ju. 2f. sep n, u: l li, flat: s si: gm 6-to. 18 i.
 5 *triccocum*, w. J. 2f. sep na, t: l ln-ol, flat, so: u glo: seeds sl.
 6 *cepa*, Ju. 2f. sep na, inf near base, 'lg t l- Onion. E.
 7 *fistulosum*, 2f. sep na, eq t inf l.
 8 *schæonopra'sum*, Ju. 2f. sep na, eq l t-fi. Cives.
 9 *olcra'ccum*, 2f. st t-l, bu: l sca, t, fur be: s si.
 10 *ascalo'nicum*, Ju. 2f. sep na, t: l sb: u glo: s 3-cuspidate. Shallot.
 11 *porrum*, Ju. 2f s flat-l, u: s 3-cuspidate. 1 she at base.
 12 *sativum*, Ju. 2f. st flat-l, bu; bu coin: s 3-cs. Garlic.
 13 *fragrans*, w. M. 2f. sep t: l li, ke, ot, pd na: s flat. False snowdrop.
 14 *senescens*, 2f. sep na, 2-edged: l li, un side so: u rd: s sb.
 15 *striatum*, w. 2f. sep na, 3-an: l li, fur on back: co spr: s si. S.
 16 *mutabile*, g-r. 2f. sep t: l li, flat: u my-f: s si, seeds sl. 2 f.
 17 *stellatum*, l li, ke un side: f in fs u, nm: spa a: 3 pt sh, sub-ot: cap 3-sided: cells 2-seeded.

18 *angulosum*, 2f. sep na. 2-edged; l li, sub-an be: u fs.

AL'NUS. 19—4. 99. Derived from the Celtic *al* near, *lan* river.

- 1 *incana*, h. l ol, a, pu be: ax of ve na: sti ln. Alder.
 2 *undulata*, h. l ol, a, rd at base: pe v h be; ax of ve na: sti o-ol.
 3 *serrulata*, O. r-g. Ap. h. l ob, ac: ve and ax h be: sti ov, ot. 9 f.
 4 *glutinosa*, Ap. h. l rd-wd, ot, ax of ve d.
 5 *glauca*, h. l ol, a. 2-sr, gl be; ax of ve na: sti na.

ALOPECU'RUS. 3—2. 10. Gr. *alopex* a fox and *oura* a tail.

- 1 *pratensis*, J. 2f. culme, so: sk cy: co lg asc. Foxtail.
 2 *geniculatus*, Ju. 2f. culm as, sk cy: glu cn h back mr: co tru. 18 i.

ALTHÆ'A. 15. 13. 74. Gr. *altha*, to cure. Mallows.

- 1 *officina'lis*, r-y. Ju. 2f. l d, ol-os 3-lo, to, 6 f. Marsh mallows.
 2 *ro'sea*, hollyhock. ♂. st e: l hr, 5 to-7 an; cre. E.
 3 *ficifolia*, fig-hollyhock. ♂. l 7-lo, sub-pal, ot.

ALYS'SUM. 14—1. 63. Gr. *alusso*, to be mad.

- 1 *hyperbo'reum*, st her: l to: s 4, 2-forked.
 2 *denta'tum*, 2f. st e: r pn, ax: rad l sub-run; ln-li, ss, sub-en.
 3 *ludovicu'num*, y. Ap. 2f. d: st nm, si, an: l li-spt, en, ot, ta.
 4 *saxatile*, y. h. st pn: l ln, soft, re. Gold basket. E.



AMARAN'TUS. 19—5. 30. *a*, not, and *maraino*, wither.

- 1 *albus*, g-w. Ju. ☼. glo ax, tri: l ob, re: st 4, si. 18 i.
 2 *græ'cizans*, g. Au. ☼. glo ax, tri: f 3-cleft: l ob, em: st brh.
 3 *olera'ccus*, Ju. ☼. glo ax, brh: l ol, ot, em. Sm f are pen. 2 f.
 4 *hy'bridus*, Ju. ☼. r pen, 2-com, heaped, e: l o-ln.
 5 *panicula'tus*, Ju. ☼. r pen, 3-com: brh spr, pu: l o, ln.
 6 *retroflex'us*, O. Au. ☼. r pen, triply-com. cp, e: brh pu: l o, waved.
 7 *hypochondria'cus*, Au. ☼. r pen, com, cp e: l ol-ln, m. Red.
 8 *spinous*, Au. ☼. r pen, tm, com: ax sp. Prickly amaranth.
 9 *pa'milus*, g. glo ax: f pen. c 5-l, concave: l o, ot, so and sm re.
 10 *sanguin'cus*, g. Ju. ☼. f pen, in dec e r, l o-ln.
 11 *blitum*, g. Ju. ☼. r tri, sub-sk: f 3-l; l o, re: st spr, or prt.
 12 *melanchol'icus*, r. ☼. glm ax, pd, rd; l ln-o, cl. Love bleeding. E.
 13 *tri'color*, Ju. ☼. glm ss: l ln-ol, cl. 3-coloured coxcomb.
 14 *lividus*, Ju. ☼. glm tri, sub-sk, rd: l ov, re: st e. Lead A.

AMARYL'LIS. 6—1. 17. From the nymph Amaryllis.

- 1 *atamasco*, w. r. J. 2f. spa 2-cleft, a: f pe: co bl, sub-eq, e: s dc.
 2 *formosis'sima*, 2f. spa 1-f: co rn: pe declined. Jacobea. E.
 AMBRO'SIA. 19—5. 55. *a*, privative, and *brotos*, mortal food.

- 1 *trifida*, O. g-y. Au. ☼. brs, 1 3-lo, sr; lo ov, ln, ac; fru 6-sp be apex.
 2 *intergrifolia*, g. Ju. ☼. 1 o, ss, ac, sr, brs cil base: r tm, sm ter.
 3 *clatior*, O. Ju. ☼. 1 2-pnt, so: pe lg cil: r tm, pn. Hog weed.
 4 *artemisifolia*, ☼. 1 2-pnt, summit pnt: r tm in threes: brh level.
 5 *paniculata*, J. ☼. 1 g, 2-pnt, at summit: r tm, sl: brh fs.
 6 *heterophylla*, ☼. cau 1 pnt, up brh ln ss: pe lg cil: r tm, sl: st pn.
 7 *bidenta'ta*, Ju. ☼. hir 1 ss, si, ol, 1-to ab spr base: fru 4-sp.
 8 *his'pida*, w. ☼. his: 1 2-pnt: digh: r sub-pn, tm. F'lr. 1 f. S.
 9 *tomentosa*, 2f. 1 2-pnt, un side d: sk sl. 18 i.
 AMMANN'IA. 4—1: 91. John Ammann. a Russian.
 1 *ramos'ior*, w-p. Au. st e, thick, sub-t: 1 ln, spr at base; f be cp wr.
 2 *hu'milis*, w-r. Au. ☼. ♂. st prt at base, brh 4 an: 1 ln, f sl. St.ed. 6i.
 AMOR'PHA. 16—10. 93. a, priv. and *morphe*, shape.
 1 *fruticosa*, Ju. ♀. so, 1 pe, em: sk lg: c pd: le few-seed. 6 f.
 2 *glabra*, ♀. g: 1 ov-ol, c g, 4 teeth ot, one ac, bauner gld: le few-seed
 3 *pubes'ccns*, w. J. ♀? sml; 1 on sh pe, ot h: sk lg, pn, h: c ac teeth.
 3 f. S.
 4 *nana*, p-b. M. ♀. 1 sub-o m so: f pd: teeth of c se ac: le 1-seed.
 5 *canescens*, b. ♀? v; 1 near sub-ss: ov-o: sk ag: teeth of c eq; o, a. 18 i.
 AMPELOP'SIS. 5—1. 72. Gr. *ampelos*, the vine, and *eps*, appearance.
 1 *quinquefolia*, O. w. Ju. ♀. 1 in fives, to: st ro, cli. Creeper.
 2 *corulata*, ♀. 1 cor, ac, to an: n pu be: r 2-par.
 3 *hirsuta*, ♀. 1 pal, 3 to 5-lo, h both sides 1 o, ac, to.
 4 *bipinnata*, J. ♀. 1 2-pnt: 1 ln-o, deeply to and lo: fin cmb. S.
 AMSON'IA. 18—5. 47. Named by Walter.
 1 *latifolia*, b. Ap. 2f. st g: 1 ln-o, up ac, pu on un of n. 2 f. S.
 2 *salicifolia*, b. M. st so: 1 ln-li, a at each end, g.
 3 *angustifolia*, b. Ap. st h: 1 nr-li, nm, e, h. 2 f.
 AMYGDALUS. 11—1. 92. Gr. *amugdalos*, the almond. Peach.
 1 *persica*, r. M. ♀. sr of the 1 all a, f ss, sl. 15 f. E.
 2 *nana*, ♀. 1 o, ta to the base, sharply sr. 3 f. Flower almond.
 AMYRIS. 8—1. 94. Gr. *myrra*, myrrh.
 1 *floridana*, w. ♀. 1 1-pa ss tm l, o, en, ot, f sub-pn: ber ta sub-glo base.
 2 *toxifera*, ♀. 1 5—7, pe, o, sub-cor, ac: r si, about lg of pe.
 ANAGALLIS. 5—1. 35. Gr. *anagelas*, to laugh, Red chickweed.
 1 *arvensis*, r. J. ☼. st spr, na, pro: pt en, flat, h at margin.
 ANCHUSA. 5—1. 43. Gr. *agechousa*, to strangle. Bugloss.
 1 *officinalis*, y. 2f. 1 ln: sk im, 1-sided: bt o. E.
 ANDROCE'RA. 5—1. 38. Gr. *aner*, stamen, and *keros*, a horn.
 1 *lobata*, J. ☼. hir: 1 in pairs, lo-pnt; seg ot, os cre, r lt. my-f. S.
 ANDROMEDA. 10—1. 51. *Andromeda*, of Cepheus, confined in a marsh.
 1 *hypnoides*, Au. ♀. 1 in sb, g: pd sol, tm, 1-f: co no. Sml, crp.
 2 *mariana*, J. ♀. 1 ov, en, sub-a at both ends, g, paler be: f brh almost
 1; pd fas: co o-cy: c l: cps o. Var. has nr ln l.
 3 *polifolia*, A. r-w. M. ♀. 1 li-ln, glf tm: co sub-glo: anther b.
 4 *arborcal*, w. Ju. ♀. brh t, g: pn tm, my-sk: co o-cy, pu: anthers li.
 5 *paniculata*, O. w. J. ♀. pu: 1 ob-ln, a, sub-en: f tm pn, na sml.
 6 *racemosa*, w. J. ♀. 1 ov-ln, a sr g: co cy: c a, base 4-an: anthers.
 7 *calyculata*, O. w. M. ♀. 1 ln-ol, o scaly dots, be: r tm, l, c a, 2-bt base:
 co ol-cy. 2 f.
 8 *angustifolia*, Ap. 1 li-ln. a, scaly dots: bt 2 r tm, l, pd sl, ax. S.
 9 *nitida*, w. r. ♀. g: brh 3-an; 1 ov, ac, en, 3 n: pd 1-f, ax: co cy. 5 f.
 0 *rhomboidalis*, f brh 3-an: 1 rh ln, en, g, tm gl: pd ax.

- 11 *axillaris*, w. M. $\frac{1}{2}$. l ov-ln, ac, r ax, closely f: co ol-o. 3 f.
 12 *acaminata*, w. Ap. $\frac{1}{2}$. g: lln-o, apex ac, en, r ax: co cy. 11 f.
 13 *floribunda*, w. g: l ol o, a sr, cr r l-sided, pn.
 14 *ferruginea*, w. J. $\frac{1}{2}$. l lg pt, ob, ot, en, dust ve be: pd l-f, ax: 4 f.
 15 *rigida*, J. $\frac{1}{2}$. l crd, on sh pe, ln, a scaly be, w ve: ax, pd l-f. 18 f.
 16 *frondosa*, w. M. $\frac{1}{2}$. pu: l ob-ln, a, sr tom; f brh pn, l: co glo. 4 f.
 17 *speciosa*, w. $\frac{1}{2}$. l ov-ot, cre: co cm: anthers 4-awned: 4 f.
 18 *tetragona*, w. $\frac{1}{2}$. l na at margin: pd ax, sl, fi, l-f: co no bl.
ANDROPOGON. 3—2. 10. Gr. *andros*, a man, and *pogon*, a beard.
 1 *scoparius*, O. Au. $\frac{2}{4}$. sk si, lt tm, pd, pa: re h; va awned.
 2 *virginicus*, $\frac{2}{4}$. cp: sup l and she so: sk sh, 2 or 3 each sub-t: abr f w va.
 3 *furcatus*, O. Au. $\frac{2}{4}$. sk dg, abr f, w awn: per awn twist. Bent grass.
 4 *macrourus*, $\frac{2}{4}$. sk lt and trm fs pn: abr f w va: awu strait.
 5 *nutans*, O. Au. $\frac{2}{4}$. pn ol, brh, no: sk by pairs: c h, awn contorted.
 6 *secundus*, $\frac{2}{4}$. pn brh, e, secund: pd 3-f; s f sb, v; per ss va very v. S.
 7 *clivatus*, $\frac{2}{4}$. pn ol, tm: brh g: f pa: c h: co cil, awn twisted. 3 f.
 8 *melanocarpus*, sk cp: f sl, inv: awn very lg. 3 f.
 9 *ternarius*, brh al, 3-spk; sk conjugate; h inv sh than glu; f tri.
 10 *argenteus*, Oc. $\frac{2}{4}$. pn lg, slender; brh sl, pa: sk lg she, h.
 11 *vaginatus*, Oc. $\frac{2}{4}$. pn cp: sh she: f pa, awned per, scabrous.
 12 *tetrastachyus*, Oc. pn e: sk sl, 4-cleft: fin pairs; per awned; 1 h. 3 f.
 13 *bicornis*, sk cp pn; pn bt, cimb, fs f ter, ss; lt one nu, cil of rac lg.
 14 *glaucus*, so, gl: sub-si: so: pn trm, ex, ol; sk al: awns lg. 1-va.
ANDROSA'CE. 5—1. 35. Gr. *andros*, a man, and *sakos*, a shield.
 1 *occidentalis*,  pu: l ol-spt, en: ph an: eps sh c. S.
 2 *carinata*, w. J. $\frac{2}{4}$. l ln-o, a, en, ke; mr cil: u few-f; l inv li-ol: di ob, en.
 3 *seytentrionalis*,  l ln, to, g, shining: ph an, sh than co.
ANEMO'NE. 12—13. 61. Gr. *anemos*, the wind. Winflower.
 1 *virginiana*, O. g-w. Ju. $\frac{2}{4}$. st dic: l up op; l gh-lo ser-a: pd sl. 18 i.
 2 *aconitifolia*, J. $\frac{2}{4}$. st dic: rd l pal; cau l ss, cls, 3-cleft; seed glo sb. F lg. 15 i.
 3 *dichotoma*, w-r. M. $\frac{2}{4}$. st dic: cau l op, 3-cleft: lo wd-ln, pd sl.
 4 *nemorosa*, O. r-w. M. $\frac{2}{4}$. st l-f: cau l in ter; l wd, lo, to, a: seed o.
 5 *luncifolia*, $\frac{2}{4}$. st l-f: cau l ter: l ln, cre-to: co 5-pt: seeds o, style hook.
 6 *thalictroides*, O. w. M. $\frac{2}{4}$. u inv: rad l twice ter, inv 6-l; u few-f.
 7 *narcissiflora*, w. Ap. $\frac{2}{4}$. f u, inv: rad l pal-my-cleft, gh; di li; pd lg inv.
 8 *cuncifolia*, w. Ap. $\frac{2}{4}$. st l-f, inv: l ter; l ss, wd tru-cre at apex: inv 3-l.
 9 *patens*, p. $\frac{2}{4}$. d: l 3-par or 3-n; seg wd gh 3-cleft, f e; c awn.
 10 *alpina*, w. $\frac{2}{4}$. l lg-pe, biter pnt; l li a f e; c l 6, spr, awn.
 11 *baldensis*, b. $\frac{2}{4}$. l g, seg 3-par with li ot di, sh-pe, inv.
 12 *deltoidea*, w. $\frac{2}{4}$. l ter; l rh, en or trifid, gh sr, a, l inv ss: c l ob.
 13 *richardsoni*, W. $\frac{2}{4}$. l re, 3—5-par; lo trifid, a to: l e-l 6, spr: sty lg.
 14 *multifida*, w. r. y. $\frac{2}{4}$. l 3-par: seg wd 3-par li a di; c l 5 to 8 d.
 15 *hortensia*, rad l dg; di 3-cleft; cau ter, ln, con, sub-di. E.
 16 *caroliniana*, O. w. $\frac{2}{4}$. l ter: l ser: inv 3-l 3-cleft: pt 14 to 20, ov: S.
 17 *walteri*, $\frac{2}{4}$. rad l pal, lg-p: scp lg, e, l-f: pt 3: ro tuberous.
 18 *ludoviciano*, r-b. Ap. $\frac{2}{4}$. scp l-f, inv, soft: l dg, up so; seg en, li, a: pt 6, ol-o, e.
ANE'THUM. 5—2. 60. Gr. *ano*, upward, and *thcino*, to shoot. Dill.
 1 *graveolens*, fruit compressed: plant annual. Dill.
 2 *focniculum*, fruit ovate: plant perennial. Fennel.
ANGELICA. 5—2. 60. Lat. *angelica*, angelic. Angelica.

- 1 *triquinata*, O. w. Au. 2f. st t, pu ab: l ter, so; par q; l olo, eq sr. 4 f.
 2 *atropurpurea*, O. g-w. J. 2f. st so, cl: l ter; sub-q; l o, a, gh-sr sub-lo.
 3 *lucida*, 2f. l eq, o, gh-sr: rad l 3-pn, cau one 2-pn. 18 i.
 4 *archangelica*, archangel. ♂. l with odd tm l lo. E.
 ANNO'NA. 12—13. 76. Malay, *menona*, food.
 1 *glabra*, Ju. r-y. h. c lg, bl: l ln-o, g: pd 2-f, op to the l. 16 f.
 AN'THEMIS. 17—2. 55. Gr. *anthos*, flower. Mayweed 2.
 1 *arvensis*, w-y. Ju. ♂. rec conic, ch-ln: seed cr-mr: l 2-pn, sub-di. 8 i.
 2 *cotula*, O. w. J. ☼. rec conic, ch-brs: seed na: l 2-pn, l sb, 3-par. 10 i.
 3 *nobilis*, w. Au. 2f. l 2-pn; l 3-par, li-sb, v: st brh. Chamomile. E.
 AN'THOXAN'THUM. 2—2 10. Gr. *anthos*, flower, and *xanthos*, yellow.
 1 *odoratum*, O. M. 2f. sk ol-o; f sub-pd, sh than awn. Sweet vernal. 18 i.
 AN'TIRRH'NUM. 13—2. 37. Gr. *anti*, and *rhis*, rhinos, nose.
 1 *elatine*, y. Ju. ☼. l al, en: pd sl, very lg. Creeping snap-dragon.
 2 *linaria*, y. Ju. 2f. e, g: l ln-li, crdsk tm, dense-f: c g, sh spur. F lg.
 3 *condense*, w-b. J. 2f. g, si: l sc, c, nr, li, ot, rt: f r: scious prt.
 4 *trianthophorum*, l wr, ln, 3-n: s dc: r tm, few-f: f lr. E.
 APAR'GIA. 17—1. 53. Gr. *apargia*, succory. False hawkweed.
 1 *autumnalis*, y. J. 2f. sep brh, scaly: l ln, run-pnt, so.
 2 *orontium*, Ju. ☼. e, brh, h: l al, ln: f sk: c dg, lg tailless co. S.
 3 *tenellum*, b. Ju. ☼. sml, si, g: l op, li, a: f ax, sh-pd: c bl.
 APHA'NES. 4—2. 92. Gr. *a* priv. *phainomai*, to appear. Piert.
 1 *arvensis*, ☼. l 3-par: di 3-cleft, h: f ax, glm. S.
 A'PIUM. 5—2. 60. Celtic *apon*, water. Parsley 1, celery.
 1 *petroselinum*, Ju. ♂. cau l li: inv minute.
 2 *graveolens*, Ju. ☼. st: cau l wd. Celery.
 APLEC'TRUM. 18—1. 21. Gr. *a*, without, and *plectron*, a spur.
 1 *hyemalis*, O. g-p. M. 2f. l rad, ln-o, my-n: lip 3-cleft. Putty root.
 APO'CYNUM. 18—5. 47. Gr. *apo*, against, and *kuon*, (*kunos*,) a dog.*
 1 *androsæmifolium*, O. r-w. Ju. 2f. l o, cymes lt tm: tube of co lgc, spr.
 2 *cannabi'num*, O. g-y. J. 2f. l ol-ov, d when young, c eq co. 3 f.
 3 *hypericiefolium*, g-w. Ju. 2f. l ln, sub-cor at base: tube of co eq c. 3 f.
 APO'GON. 17—1. 53. Gr. *a*, without, and *pogon*, beard.
 1 *humilis*, y. Ap. ☼? st g: rad l ss; cau strap form a, en, ss, gl. 6—12.
 AQUILE'GIA. 12—5. 61. Lat. *aquila*, an eagle. Columbine.
 1 *canadensis*, O. r. & y. Ap. 2f. horns strait: s cx: l dec. 15 i.
 2 *brevistylis*, sub-pu: spur a sh than limb: style sh: s sh co.
 3 *vulgaris*, J. 2f. horns curved: st l g: l dec. E.
 4 *coerulea*, b. J. 2f. horns twice lg pt: s styles sh co: ne a: seg of l lo.
 18 i. S.
 AR'ARIS. 14—2. 63. *Arabia*, by physicians of that country. Wallcress.
 1 *sagittata*, w. J. ☼. ♂. l pu brh; rad o ol, st-l ln, sagittate.
 2 *thaliana*, Ju. ☼. l h, sub-dn: rad ones ol, pe: st brh, h at base: 6 to 12 i.
 3 *lyrata*, w. ♂. st up l so glau: rad l ly pnt, pilose: st brh. 10 i.
 4 *laevigata*, w. 2f. st l li, ol, sagittate, so; pd e: siliques nr lg. 2 f.
 5 *canadensis*, O. w. J. 2f. st l ss, ol, ln, nr at base, pu: pd pu, n. 2 f.
 6 *rhomboidea*, O. w. M. 2f. l g, rh, to, lower rd, on lg pe: ro tu. 15 i.
 7 *alpina*, w. 2f. brh: l my-to, v, ln, a; rad sub-pe; cau hr-cls.
 8 *reptans*, Ju. 2f. l rd, en, hir: having crp shoots.
 9 *stricta*, w. 2f. rad l ol, ta to base, sub-ly-pnt, rm h; cau few, ln, e.

* Thompsonians, call the dog-bone wandering milkweed.

- 10 *lyraefolia*, so, st straight, si, rad l ly, cau ss, ol, a, to: silique sab.
 11 *pendula*, ☼. l sagittate, ol, cls, en, so: silique 2 edged: li, pnd.
 12 *hirsuta*, e; l to, hir; rad o-ol, pe; cau ov ln-sagit siliques nm, e.
 A'RACHIS. 16.—10. 93. Gr. *arakos*, a kind of rooting plant.
 1 *hypogæa*, ☼. st pilose, prt: l pnt, f ax. Pea nut. E.
 ARA'LIA. 5—5. 59. A name of an unknown Canadian. Spikenard
 1 *spinosa*, y-w. Au. ♀. st l th, l 2 pnt; l sr: pn brh: u nm. 5 f.
 2 *hispida*, O. w. J. ♀. st pe rg brs: l 2-pnt; l o, gh-sr, g: u lg pd. 20 i.
 3 *racemosa*, O. w. J. 2f. spr brh. pe 3-par, 3—5-l; brh ax, u my, pn. 4 f.
 4 *nudicaulis*, O. w. M. 2f. st, scp, l 2-ter, q: l ol: sep na, sh l; u few.
 AR'BUTUS. 10—1. 51. Lat. *arbutus*, Pliny's strawberry-tree.
 1 *ura-ursi*, O. w-r. M. ♀. st prt: l wd-ob, en: ber 5-seed. Bear-berry.
 2 *laurifolia*, ♀. l ol, ac a sr, g: r ax, ss, sl lg.
 3 *menziesii*, ♀. l o, en, g, lg pe; r ax tm, pn dense, 1-sided.
 4 *tomentosa*, ♀. brh his: l ov, a, cor d be, sh pe: pd ax, lg of l, hd-r.
 5 *alpina*, w. M. ♀. st prt: l ob, a, rg sr: r tm.
 ARC'TIUM. 17—1. 54. Gr. *Arctos*, a bear. Burdock.
 1 *lappa*, O. Au. 2f. cau l hr, pe to: f pu, glo: c so.
 ARENA'RIA. 10—3. 82. Lat. *arena*, sand. Sand-wort.
 1 *serpyllifolia*, w. Ju. ☼. st dic, spr: l o, a, sub-cil: c a, str: pt sh c.
 2 *glabra*, w. O. 2f. g, e, my st: l sb-li, spr: ped l-f: l c ov, sh pe. 6 i.
 3 *stricta*, w. M. 2f. g, e, my st: l sb-li e: pn few f: pt lg c ov-ln. 12 i.
 4 *squarrosa*, w. Ju. ♀. ces: un l sca-im, g: st si: f tm, e: pt lg c. 6 i.
 5 *rubra*, r. J. ☼. g: l fi, lg joints: sti cn, she: s 5: cap an or glo.
 6 *thymifolia*, ☼. st dic, l ov, sub-a: pd al, ax, sl, el: c a: pt of lg of c.
 7 *macrocarpa*, 2f. ces: l crd; cil: of c li: pt twice lg as c: cps thrice.
 8 *fasciculata*, ☼. sub-g, ces: st e: l sb, pk fur: f-fas: c sb, striate: pt sh.
 9 *laricifolia*, 2f. pu, ces, my-st: l se; st l-3-f, e: l of c li, sub-hir, half lg pt.
 10 *juniperina*, 2f. sub-pu, e, my-st: l sb, 3-sided, pn tm, dic my-f: m, half lg pt.
 11 *propinqua*, 2f. ces, gld-h: l li-sb, a, 3-n: c a, 3-n, lg pt. sh than cps.
 12 *rubella*, 2f. st ces, nm: pd tm, pu, l-f: l li-sb, ot, 3-n: pt ln-ov, sh 4-va cps.
 13 *rossii*, 2f. g: l 3-sid-sb, ot; b, n-less, eq f: pd l-f, el, pt ol, lg os 3-n c.
 14 *franklinii*, 2f. brh e fs nm: l g sb-se: f fas: di of c sb, br-n, lg ol pt.
 15 *buxifolia*, pu: l o-ol, ss: st crp: pd dic, 2-f: pt lg c: cps eq c.
 16 *lateriflora*, O. w. J. 2f. pu: st e, si or dic h: l ol-ov, ot, cil, 2 to 4-f; pd al bt. 6—10 i.
 17 *peploides*, Ju. 2f. g: l o or ol, a, f sub-sl, sk-pd: di c ot, lg co.
 18 *diffusa*, w. Ap. pu: st brh: l ln-ol, a, at both ends: pd sl, ax, lg l: S.
 19 *patula*, 2f. pu: st fi, pn, my-f: l se sb, spr: pt sub-em, lg a c.
 20 *obtus*, 2f. ces, my-st: l li-sb, ot ke, 1-sided: nec ol-ot, 3-n: cps o, sh.
 ARETHU'SA. 18—1. 21. From the fountain of that name.
 1 *bulbosa*, O. r. J. 2f. l-less: ro glo: sep she, l-f: c sup di rc: lip cre: flr.
 ARGEMO'NE. 12—1. 62. Gr. *argema*, the cataract.
 1 *mexicana*, y. Ju. ☼. l pnt, gh, sp: f ax. Var. l pnt: fl.
 ARISTIDA. 3—2. 10. Lat. *arista*, an awn. Beard grass.
 1 *dichotoma*, O. S. ♂. 2f. ces: culm dic: f r-sk: lt awns sh. 8—12 i.
 2 *stricta*, 2f. culm and l e: l pu. r lg, sk, crd: awn twice lg co, spr. 3 f.
 3 *purpurascens*, 2f. culm fi, e, si: l nr: lg-sk pn: awns twice lg co. 2 f.
 4 *spiciformis*, 2f. f cr, sub-sk: middle awn v at base. 3 f. S.

- 5 *gracilis*, 2f. f in sk, few-f, rt, lt awns sh, e; intermediate ones lg, ex.
 6 *lanosa*, 2f. pn e, ap: f in r: c lg co: she of l woolly. 2—4 f.
 7 *oligantha*, 2f. culm sub-ram: l convo-fi: f sl, distant: awn lg.
 8 *fasciculata*, culm fi, e, brh: l nr: pn lg, sub-sk: c sh co: awns lg f.
 9 *pallens*, pn few-f, pe, al 2-f, apx: awn cap, lg: l fi.
 10 *tuberculosa*, culm e, dic, joints with ax gld: pn rigid: va of c ke: co stiped. 3 f.

ARISTOLO'CHIA. 18—6. 23. Gr. *aristos*, best, and *lochcia*, birth.

- 1 *sipho*, J. h. l hr, a: st cli: pd l-f, with an o bt: co as; limb 3-cleft.
 2 *serpentaria*, p. J. 2f. l hr, ol, ac: st zigzag, as; pd rad: lip of co ln.
 3 *tomentosa*, A. g-y. st cli: l rd-cor, d be: co v; border 3-cleft, eq. S.
 4 *hastata*, st fl, si, e: l cor, a: f on sep; lip of co o.

ARMENIA'CA. 11—1. 92. From Armenia. Apricot.

- 1 *vulgaris*, h. l sub-cor: sti pal. Var. 2, fru sml, yellow. Var. fru sub-emp.
 2 *dasycarpa*, h. l o, ac, 2 sr: pe gld: fru glo, pu. Apricot.
 AR'NICA. 17—2. 55. Gr. *ptarmica*, *ptairo*, to sneeze.
 1 *nudicaulis*, y. J. h. h: rad l op, ol-ov, sub-dn: st l-less, di at top.
 2 *doronicum*, y. Ju. h. l rt to, hir be; rad pe, ol; cau al, ln ol: st l-f.
 3 *plantaginica*, y. Ju. 2f. g: l en, a, 3-n; rad ln-spt, cau op, ln, ss.
 4 *maritima*, h. l ln; lower ones sr: st l, my-f.
 5 *fulgens*, y. Ju. 2f. h: rad l ln, ot, ta: pe 3-n: cau l op, rt, li: st l-f
 1 f. S.

- 6 *claytoni*, y. Ju. h. hir: rad l op, ol-o, sub-dn: top di into l-f pd. 2 f.

ARONI'A. 11—5. 92. Gr. *aronia*, the medlar tree. Shad bush 2,

- 1 *arbutifolia*, O. w-r. M. h. l ln-ob, cre-to, d be, v gld ab: f cmb: c d.
 2 *botryapium*, O. w. Ap. h. l ol ov, es, g & d: f r: pt li: gm pu. 20 f.
 3 *sanguinea*, O. w. M. h. l ov, ot at ends, m; r few-f: c g: pt li, ot.
 4 *melanocarpa*, O. w. M. h. l ob-ol, ac, m, sr, g be; f cmb: c g. 4—6 f.
 5 *oralis*, O. w. M. ♂. l rd-ov, a, g: f r: pt ob: gm, seg of c pu.
 6 *aluifolia*, h. so: l rd, up part to, pnt n, sub-glau be: r si, el. S.

ARRHENATH'ERUM. 3—2. 10. Gr. *arrhen*, stamen, and *atheirēs*, sharp.

- 1 *arenaceum*, J. 2f. pn eq, no; awn 2-lg as f: culm so: ro nodose. 3 f.
 2 *penusylvanicum*, Ju. 2f. pn, brh sh al ta, awn twice lg as f: seeds v.
 3 *kentuckiensis*, 2f. brh of pn fas: up f has su va sh awn below tip. S.

ARTEMI'SIA. 17—2. 55. *Artemisia*, the wife of Mausolus. Worm-wood 8, southern-wood 9. mug-wort: artemisia 7.

- 1 *canadensis*, O. w. y. Au. 2f. sub-de, pu: l, li-pnt: brh sk-f: c sca.
 2 *caudata*, 2f. st si, her brh py: l bipn, pu; up pn, with al seg: f pe, e, glo-o. 2 f.
 3 *chinensis*, 2f. hoary: lower l wd, ot: f glo, pd, no.
 4 *spithamea*, 2f. sml, pu: l li, up pnt; di few, li, a: f r, sh-pd, hem.
 5 *gnaphaloides*, 2f. d: st si, her: l ln-li, sub-en, d both sides: p f6 or 7.
 6 *rulgaris*, 2f. l d be; cau pnt; di ln, sub-to, a; fundi, li-ln: ol, e: c d.
 7 *pontica*, l d be; cau bipn; l li; brh si: f rd, pd, no. Artemisa. E.
 8 *absinthium*, 2f. st brh, pn: l h; rad pnt; di ln, to, ot; cau 2-pnt.
 9 *abrotanum*, 2f. & h. st straight: l bipn; up cap, pnt: c pu hem.
 10 *cana*, 2f. h: llg, ln-li, a, n, whi wd, a 3-lo: f ov, in glm, ax, ss. S.
 11 *santonica*, 2f. cau l g: brh und: sk l-sided, rx: f sub-ss, 5-f.
 12 *campestris*, 2f. caul se-pnt, g; rad pnt, 3-cleft di: st prt, brh, f o, pd.
 13 *frigida*, Oc. 2f. l pnt; l 3-par, li, a; f pnt, 3-par: stas: f glo, no.
 14 *biennis*, ♂. l g; rad ones 3-par-pnt; cau pnt; up li, und: st straight.

- 15 *longifolia*, 2f. h. st si: l en, ln-li, ac; mr rx; u side d: f cy-o, e.
 16 *serrata*, 2f. lln, ac; mr sr; up side so, un d: f pn, e; c sml, cy-o. 5 f.
 17 *columbiensis*, 2f. h. lln-li, a, hoary, en: f ol, glm, ax, ss, perfect: 10.
 18 *cernua*, 2f. st brh: rad l 3-cleft; up en, ln-li, so: r pn, no: f pe, sub-glo, c sca. 8 f.

- 19 *ludoviciana*, 2f. st si: lower l pnt; up ln, en, h ab, d be: f o, e, ss: pn si. 2 f.

ARUM. 19—12. 7. *aron*, Egyptian word. Wild turnip 3.

- 1 *dracontium*, J. 2f. w. s. st: l ped: lln-ol, en; spa sb, lg ol spa. 12—18.

- 2 *atrorubens*, 2f. st-less: l ter; l o, ac: spa cy: spa ss, o, ac, spr ab.

- 3 *triphyllum*, O. p. g. w. 2f. sub-cau: l ter; l o, ac: spa o, ac, pd.

- 4 *quinatum*, 2f. st-less: l q, ln, ac. S.

- 5 *calteri*, A. st-less: l sagittate, trian: an a div.

ARUN'DO. 3—2. 10. Lat. *arundo*, a reed. Reed grass 1.

- 1 *canadensis*, Au. 2f. pn ol: glu sca, pu, lg as co: h at base eq va: culm so.

- 2 *coarctatu*, Ju. 2f. pn sk: c lg co: co lg h, awned below tip. 3—5 f.

- 3 *brevipilis*, 2f. pn cap: c uneq, sh co, b at base: co eq: h sh. 3—4 f.

- 4 *aroides*, 2f. pn p: c 2-f, g, uneq: co lg of c: h eq co: l flat, sca.

ASA'RUM. 18—12. 23. Gr. *a* without, *sairo*, to adorn. Snake-root 1.

- 1 *canadense*, O. g-p. M. 2f. lk in pa: c 3-par; di sub-ln, r.

- 2 *virginicum*, 2f. l sl, rd hr, g, f sub-ss: c g ab, sh bl. L speckled so.

- 3 *arifolium*, p. 2f. l sub-cor: c border 3-cleft, pu within. S.

ASCLE'PIAS. 5—2. 47. *Asclepias*, Greek Aesculapius. Milkweed.

- 1 *syriaca*, O. w-p. Ju. 2f. st si: l ln-ol, a, d be: u sub-no, d, 3 to 5 feet.

- 2 *obtusifolia*, p. J. 2f. l cls, ol, rd-ot, sin m: u tm, lg-pd, my-f, g.

- 3 *phytolaccoides*, O. w-g. Ju. 2f. st e, si: l br-o, a, g, pale be: ne tru, 2-to.

- 4 *periplocifolia*, w-g. Ju. 2f. l sub-ss, ln-o, nr up, a, so, mr rough: 2 f.

- 5 *amæna*, Ju. 2f. st si, h two sides; l ss, ol-ov, pu be: tm u nee, ex.

- 6 *purpurascens*, p. Ju. 2f. st si: l o, v be: u e: horn of ne rx. 2 f.

- 7 *pulehra*, r. Ju. 2f. lln, h un side: st di: u e, in pa. F sml.

- 8 *variegata*, w. Ju. 2f. st si e: l o, pe, rg na: u sub-ss, pd, tom. u dense.

- 9 *incarnata*, O. r. Ju. 2f. st e, d, brh ab: l ln, sub-d: u double at origin.

- 10 *parvisflora*, w. Ju. 2f. so e, si: l pe, u tm, lax f; pd cap. 1—2 f.

- 11 *quadrifolia*, O. w. p-w. M. 2f. ste, si, so: l o, a or ac; middle in 4.

- 12 *reticillata*, O. g-p. w. Ju. 2f. st e, si sml pu: l nr-li, g, wr, sc.

- 13 *tuberosa*, O. y. Ju. 2f. st e, at top spr-brh: l sc, ol-ln, rough-h.

- 14 *connirens*, J. 2f. l ol, ov, m, h, ss; l of nelg at summit. 1—2 f. S.

- 15 *tomentosa*, 2f. l ov, ln, a, tom: u ss, with horns ex. 2 f.

- 16 *amplexicaulis*, p. w. 2f. g: st de: l ss, cor, ve, gl ap: u tm ax.

- 17 *paupercula*, r. g. M. 2f. l li, ln, lg, rt, g with mr pu: u few-f. 3—4 f.

- 18 *nirea*, O. Ju. 2f. l o, ln, g: u e, lt, sl: st si.

- 19 *angustifolia*, g. w. M. 2f. l sc, strap, pu: u sl, tm; horns included.

8—18 i.

- 20 *cinerea*, J. 2f. l lg, li, op: u few, tm, na: horns sh. 3 f.

- 21 *speciosa*, tom: l hr-o, ot, op, sh-pe: u ax, tm: ne e, ln, a horn sh.

ASCY'RUM. 12—3. 68. Gr. *a*, without, *skuros*, rough. Peter's wort.

- 1 *crux-andrea*, y. Ju. h. my st, div: l sub-ln-ol, ot: emb tm: f sub-ss.

- 2 *hypericoides*, y. Ju. h. brh 2-edged: l ol, with 2 gld at base; f tm.

- 3 *amplexicaule*, Ap. y. 2f. e, brh cp: l o, ol, cls; l of c cor. 2 f. S.

- 4 *pumilum*, y. 2f. st sml, si, quadran: l ov, ot, fas: pd lg, rx: sty l or 2.

- 5 *pauciflorum*, dc, my-st: l near other, ol-li ot: f or few: pd rx, 2-bt un.

- 6 *stans*, h. st wi, brh straight: l ov-o, ot gl: l of c hr-or: s united.

ASPARAGUS. 6—1. 12. Gr. *sparasso*, to tear.

1 *officinalis*, Ju. 2f. st her, unarmed, sub-e, t: 1 brst, soft: sti sh. E.

ASPHODE'LUS. 6—1. 16. Gr. *a*, privative, *sphallo*, to excel.

1 *luteus*, 2f. st l: 13-sided, striate. E.

2 *ramosus*, 2f. st brh, na: 1 ensform, so, ke.

ASPID'UM. 21—1. 5. Gr. *aspis*, a small shield, k. Snuff-box.

1 *cicutarium*, 2f. 1 pnt; di ac, sin, pnt, en; fru in rows.

2 *acrostichoides*, O. J. to Au. 2f. 1 ln, sabre-form, a, cil sr: up du wd un.

3 *lancastriense*, 2f fr pnt; di op; seg trian-o, a sr; stripe na. Lg nr.

4 *noveboracense*, Ju. 2f. fr pin: 1 li-ln, pnt, di, sti so, fru nr. Damp.

5 *cristatum*, 2f. fr ln-o, g, pin; 1 sub-cor-ol, pnt; div ol, ot, to-sr.

6 *aculeatum*, Au. 2f. fr pnt: 1 o, a, sr, up fru tru, of lower sh wd.

7 *marginale*, O. Ju. 2f. fr 2-pnt: 1 ol, ot, de, cre; fru mr.

8 *filix-mas*, fr 2-pnt; 1 ol, ot, sr: fru mid-rib apx: sti ch. 2 or 3-f.

9 *intermedium*, J. 2f. fr 2-pnt; les 1 li, gh-pnt; di m-sr: stipe ch.

10 *spinulosum*, Ju. 2f. fr 2 pnt; les 1 ol, de, gh-to; di m-sr: stipe ch.

11 *dilatatum*, Ju. 2f. fr 2-pnt: les 1 ol, gh-pnt; di m-sr: stipe ch: inv so.

12 *goldianum*, Ju. fr br-o, so, bipnt; di ln, pnt; seg ol, ot, rt sr.

13 *thelypteris*, Ju. 2f. fr pnt: 1 ln-li, pnt, g: di o, a, en: fru-dots mr.

14 *bulbiferum*, Ju. 2f. fr bipnt, ln-ol: 1 op, ol, ot, sr, lower pnt.

15 *asplenoides*, Ju. 2f. fr bipnt: 1 ln-li, gh-sr: sr 2 or 3-to; tm more a.

16 *filix-femina*, Ju. 2f. fr bipnt: 1 ln-ol, straight; fru ol.

17 *angustum*, Ju. 2f. fr bipnt: 1 ln, gh-sr, subbi; lower elab: fru-dots ol.

18 *atomarium*, fr bipnt: 1 de, o-ol, pnt; di to: fru-dots sc.

19 *tenue*, Ju. 2f. bipnt; b o de to, fru sl near to.

20 *rudidulum*, J. 2f. fr bipin: 1 ch-brs be, ol, ot, cre; fru-dots small.

ASPLE'NIUM. 21—1. 5. Gr. *a*, without, and *spleen*, the spleen.

Spleen-wort, walking leaf.

1 *rhizophyllum*, O. Ju. 2f. fr ln, sti, sub-cre, ro hr ears at base.

2 *angustifolium*, Ju. 2f. fr pnt: 1 al, up sub-al, li-ln; up tru, un rd.

3 *ebeneum*, O. Ju. 2f. fr pnt: 1 ss, ln, cor at base, ab, au. 6—10 i.

4 *melanocaulon*, Ju. 2f. fr pnt: 1 rd, ot cre at base wd: stipe g.

5 *thelypteroides*, O. Ju. 2f. fr pnt: 1 ss, ln, ac, pnt; di ol, ot sr: fru parl.

6 *ruta-muraria*, O. Ju. 2f. fr bipin base, pnt apex, ot dt. 1—2 i.

7 *montanum*, Ju. 2f. fr g, bipnt: 1 ln, pnt; di 2 or 3-to. 2 f.

AS'TER. 17—2. 55. Gr. *astēr*, a star. Star-wort.

1 *hyssopifolius*, w. y. p. Au. to Oc. 1 li-ln, 3-n, pte, a; mr sca: bli cmb, com: ra 5-fl: c im, 2-sh dk. 24.

2 *salidaginoides*, O. w. Au. 2f. 1 li-ln, os-3-n, en, ot; mr sca: bli cmb: fl ss, ag: ra 5-fl: c sh dk, in; scales ol, ot, c-p, sub-rx apex. 2 feet.

3 *ledifolius*, O. v. w. S. Oc. 2f. 1 li-ln, ta, w n, rg, re mr: brh fi, 1-fl, na: c, im, 2-sh dk: 1 a: ra 20-fl: a foot.

4 *rigidus*, p. y. Au. 2f. 1 li, m, ke rg; mr rg-cil: cau l rx; brh spr, sb: st e, s brh ab; brh 1-fl. cmb: c im, twice sh as dk: scales ot, ra 10 fl.

5 *linarifolius*, O. p. y. Au. 2f. 1 wn, li, m, dotted, rough, stiff, brh re: st sub-de: brh level-toped, 1-fl: c im, of lg of disk: f sml: st rg.

6 *graminifolius*, p. Au. 2f. 1 nr-li, wn, g, e: tm brh na, 1-f: c, eq disk.


7 *linifolius*, 2f. 1 li, without n, rx-spr: brh level-top-cmb, 1: c im, sh: ra eq to disk. 18 or 24 i high.

8 *subulatus*, Au. 2f. g, sml-fl: st pn: brh many-fl: 1 li-sb: c cy; lig fl of ray sml.

9 *foliolosus*, Au. 2f. 1 li-ln, ta both ends, ac: st pu, pn, e: brh few-fl: c im: scales li, a, c-p. F sml.

- 10 *tenuifolius*, w. Au. 2f. 1 li-ln, ta to ends; m his: st g, brh, c im.
- 11 *dumosus*, O. w. y. Au. 2f. 1 li, g; brh are sh: brh pn: c-cy, im:
Var. violet rays, and g t. Fl Sml.
- 12 *ericoides*, O. w. y. Au. 2f. 1 li, g: brh sb, ap; cau el: c sub-scurfy: 1
st g. Fl sml.
- 13 *multiflorus*, O. w. y. Au. to Nov. 2f. 1 li, so: st brh, diffuse, pu;
brh one way: c im: scales ol, scurfy, a.
- 14 *ciliatus*, 2f. 1 cil: cau ln-li, n; brh ones sh, ln. 3-n: st brh, pu; brh
pn: c im, spt, ragged scales.
- 15 *paludosus*, b. y. Au. Nov. 2f. 1 ss, sb, g, mr sca.
- 16 *flexuosus*, L. O. y. w-p Au. 2f. g. 1 sb-li, fleshy, sub-rx: st, brh;
brh spr, brs, 1-fl: scales of pd, sb: c im, scales c-p, a; fl sunl.
- 17 *concolor*, r-b Au. 2f. 1 ol-ln, pu both sides. st si, e, pu: r tm: c im,
scales ln, silky, c-p. 1-f.
- 18 *cornifolius*, O. w. Au. 2f. g: 1 ol-o, ac, sh pe; mr rg: st g: pn few-fl;
brh 2-fl; c sub-im.
- 19 *humilis*, w. Au. 2f. 1 sub-rh, ov-ln, ac at ends, sub-pe, g; mr his:
cmb dic, na, few-f: c lax-im: rays 8-f. Fl g. 1 f.
- 20 *amygdalinus*, O. w. S. 2f. 1 ln, ta base, ac; mr rg: st si, level-top-
cmb: c im: scales ln, ot. Ralr.
- 21 *salicifolius*, r-b Au. 2f. 1 li-ln, sub-en, g: st g, pan at top: c lax-im:
scales a, spr at tips. 4—6 f.
- 22 *aestivus*, b. Ju. to S. 2f. 1 ln, sub-cls, ta to apex: mr rough: st brh
from base, e, his; brh pilose: c sca: lax, li, a, eq. 2 f.
- 23 *nara-angliae*, O. b-p. Au. 2f. 1 li-ln, cls, au at base: st sub-si, stiff: fl
sub-ss, tm, crd: sca of c lax, cl, ln, lg disk. 10 feet: flr.
- 24 *cyaneus*, O. b-p. Au. 2f. 1 li-ln, cls, so: st pn, g: brh r: sca of c, ln,
eq disk, inner cl at apex. 3—4 f. F my, lr.
- 25 *phlogifolius*, w. p. Au. 2f. 1 ln, hr, cls, pu be, rough mr: st si, pu:
pn tm, lax, few-f: scales of c lax, im, ln. 18 to 24 inch.
- 26 *undulatus*, 2f. st 1 hr-ol, cls, sca, to near summit: brh of pn div, few-
fl: c. Flr. 3.
- 27 *sagittifolius*, b. 2f. 1 ln-ol, ac, ss, sr in middle; rad ol, hr, ar, pe: st
g, brh: scale of c, im, ln.
- 28 *diversifolius*, y. p. 2f. 1 en, pu, sub-sca; lower cor, o, wi pe: up ln-ol:
pn loose, brh r. 3 f.
- 29 *paniculatus*, O. b-p. Au. to Nov. 2f. 1 o ln, sub-sr, pe, g; rad o-hr,
sr, pe; pe na: clax, sub-im. 2—4. F sml, nm.
- 30 *cordifolius*, O. S. 2f. 1 hr, h be, sr, pe; pe wi: st pn, so: pn div: c
lax, sub-im. F sml.
- 31 *corymbosus*, O. w. Au. 2f. 1 o, sr, ac, so; lower hr, pe; pe na: st g,
level-top-cmb ab: brh pilose: c ol, im: sca ot, c-p. Flr. 14 i.
- 32 *macrophyllus*, O. w-b. Au. 2f. 1 o, pe, sr; up o-hr, ss; lower hr, p;
pe sub-mr: st brh: c cy, im: sca ol, a. 1—2 f. Flr.
- 33 *amplexicaulis*, O. b. S. 2f. 1 o-ol, a, cls, hr, sr, g: st pa, g; brh 2-f:
sca of c ln, im.
- 34 *prenanthoides*, b. 2f. 1 cls, spt-ln, ac, sr in middle, hr-form at base:
brh li: sca of c ln, scurfy.
- 35 *lavigatus*, O. r-p S. to Nov. 2f. 1 sub-cls, br-ln, sub-sr, so: st brh,
g; brh my-f: scales of c ln, lax, eq disk.
- 36 *versicolor*, y. w. Au. 2f. 1 sub-cls, br-ln, sub-sr, g; rad sr in middle:
st brh, g: scales of c ln, lax, sh than disk. F my, lr, elegant.

- 37 *mutabilis*, p. y. Au. to Oc. 2f. 1 sub-cl: up ln, ac, en; lower ln, at base nr, sr; wand brh: c sh than disk, lax: st g.
- 38 *lavis*, b-p. S. to Nov. 2f. 1 sub-cl, rt, ol, en g; rad sub sr: brh si, 1-f: c-im, 1 sub-wd, a, thick at apex: st g, an.
- 39 *concinus*, b-p. S. to Nov. 2f. 1 ln, sub-cl: lower sub-sr, g: st si, pn at top: c im.
- 40 *puniceus*, O. p. Au. to Nov. 2f. 1 cl, ln, sr: brh pn: c lax, lg dk, 1 li-ln, sab-eq: st his. Var. St purple. From 3 to 10 feet: f lr.
- 41 *floribundus*, 2f. 1 sub-cl, ln; lower sr: st g: brh cmb; brh my f, h: scales of c lax, ln, im.
- 42 *novi-belgii*, w-p Au. 2f. 1 sub-cl, ln, g, rg at mr; lower sub-sr: brh sub-di: c lax-im, 1 li-ln: st t, g.
- 43 *bellidiflorus*, r. y. 2f. 1 cl, nr-ln, sca ab, sub-sr be: st brh: scales of c ln spr.
- 44 *spectabilis*, b. Au. 2f. 1 ln, sub-cl: lower sr in middle: brh cmb: 1 of c lax, wd, a, scurfy. 2 feet: f lr.
- 45 *serotinus*, b. 2f. 1 ol-ln, ac, ss, g; mr rough; lower sr: brh cmb, g; brh 1 f: scales of c ln, ac, spr. 3 feet: f lr.
- 46 *tardiflorus*, b. Oc. 2f. 1 ss, sr, g, spt-ln, ta to base, rx at mr both sides: brh div: c lax, 1 ln-li, sub-eq, g. F sml.
- 47 *blandus*, p. Oc: 2f. 1 cl, ol-ln, ac, sr, g: st brh in py; brh ax, r, lg than l: pe d, not wi: c lax, sh dk.
- 48 *acuminatus*, w. 2f. 1 br-ln, nr en at base, uneq sr ab, lg-ac; st si, fl, an; pn dic; scales of c loose, li; has high st: pn my-f l; lower st.
- 49 *conyzoides*, O. w. Ju. 2f. 1 ol, 3-n, nr, a at base; up ss, sub-en; lower pe, sr: st si, cmb at top: c cy. scurfy: rays 5, sh. 20 i high: f sml.
- 50 *nudiflorus*, r. 2f. st si, so: 1 ss, ln o, sub-ac, sr; up side sca: cmb si, few-f: pd h or na, 1-f: c-im: scales cil.
- 51 *radula*, w. S. 2f. 1 ln, sr, ac, rg, rough: st e, an, si: cmb tm: c im: 1 ln, ot, scurfy.
- 52 *striatus*, y-r. S. 2f. 1 ss, nr-ln, sr: st 1 or few-f ab: scales of c im, c-p, ol, a, eq disk. Four to seven i.
- 53 *tradesianti*, O. w-p. Au. 2f. 1 ln, sr, ss, g: brh wand-like: c im: st te, g. 3 to 4 feet: f sml.
- 54 *recurvatus*, O. b. S. 2f. 1 ss, nr-ln, ta to base; lower sr in mid: st brh, g: sca of c lax, im, li-ln, sub-eq.
- 55 *laxus*, w-y. S. to Nov. 2f. 1 li-ln, ac; rg nr; lower sub-sr: st sub-rx: brh spr: st lax, pn at apex; c im: 1 ln, a, rx at apex.
- 56 *juncus*, r. Au. 2f. 1 ln-li, ss, g; lower sub-sr; brh ln: st pn, g: wand brh: c im. 2-6
- 57 *draeuneuloides*, w. S. 2f. 1 li ac, en; lower li-ln, sub-sr; brh cmb: c im: st so. 3 or 4 feet.
- 58 *miser*, w. S. 2f. 1 ss, ln, sr, g: c im: 1 a: f of disk and ray eq: st sub-v.
- 59 *divergens*, O. w-r. S. 2f. 1 ln, sr, g: cau li-ln, el: brh spr: c im: st pu. 3 to 5 feet: f sml.
- 60 *diffusus*, w. S. to Nov. 2f. 1 ln, sr, g: bre spr: c im: st pu. F sml.
- 61 *pendulus*, w. Oc. to Nov. 2f. 1 ln, s., g; brh rt: brh divaricate, pendulus: st pu.
- 62 *eminens*, y. r. S. 2f. 1 ln-li, ac, scr at mr; un sub-sr: st pn; brh 1-f: c lax-im, with ln l.

- 63 *simplex*, w. y. 2f. 1 ln, ac, sca at mr; cau sr at apex; those of brh en; st g, pn at apex: c lax-im, li-sub l.
- 64 *polyphyllus*, w. y. 2f. 1 li, en; rad ones ol, sub-sr: st brh, h: c lax-im.
- 65 *lanceolatus*, w. p. Au. 1 lu-li, ss, en, g; lower ln, sub sr; st brh, g; c im, with ln spr l.
- 66 *fragilis*, w. 2f. 1 li, ac, en; rad ones ol, sr: brh cmb-pn: c im, with cp scales: st g. 2 f.
- 67 *alatus*, p. y. 2f. c sub-o; scales li a, rx, spr towards apex: rays, nm, nr: rec flat, sub-na, ol, pu: egret pilose; li sca: l o, ac, ta to pe, sr.
- 68 *chinensis*, . 1 o, to, pe: cau ones ss, at base wd; floral ln, en; st his: brh 1-f: cl. E
- 69 *tortifolius*, Au. 2f. 1 cu, ob, a, en pu: f ss: scales of c li-ln, cp: 2 S.
- 70 *granuliflorus*, p. y. Oc. 2f. 1 sub-cl, li, sub, rx, mr cil his: st h: brh 1-f, c rg; scales li ln. 3 f.
- 71 *exilis*, p. y. S. 2f. g: st tall, sub-brh: 1 lg, li, sb: hd r: scales of c ln-li, half lg as ray. 4—5. f.
- 72 *racemosus*, p. y. S. 2f. 1 ln-li, sub-pu be; mr sca; brh lg: hd ss, crd summit brh. 2 f.
- 73 *squarrosus*, b. y. S. 2f. 1 n, ss, o, a, rx, rigid: mr his: st brh, h: brh 1-f: scales inv ln, h. 2 f.
- 74 *reticulatus*, w. Au. 2f. 1 ss, ol, ln, a, gl to in, 3-n, ve be: f r: scales of c a. 3 f.
- 75 *virgatus*, b-p. 2f. 1 ln-li, cls, g: st sub-brh: brh e: hd r: scales of c a, squarrose. 3 or 4 f.
- 76 *carolinianus*, p. Oc. 2f. st shrubby, fl, bre, pu: 1 ss, ol-ln, ta to each end: scales of c ln-li, pu, sub-squarrose.
- 77 *sarculosus*, p. y. Oc. 2f. st si, pu summit: 1 ob-ln, a, sub-sr, sca a^h, up sml: f few, lr: scales of c ol, o, rx, pu. 12—18 i.
- 78 *discoideus*, p. S. 2f. st e, sub-v: 1 spt-o, a, sr, h be: scales nf c sb, v, sub: f of ray none. 2—3.
- 79 *scaber*, p. y. 2f. lower l pe, ol, cor, a, en; up ss, cls, ln-o, ta to a point: 1 sca: pn loose, lg; brh r. 3 f.
- 80 *dichotomus*, w. p. y. Oc. 2f. 1 ss, ov, ot, pu: cmb sub-dic: brh na, lg.
- 81 *obovatus*, w. y. M. 2f. 1 ss, o ob, ot, sub-rg, pu: cmb: sca of c im.
- 82 *canescens*, p. Au. 2f. pu: 1 li: pn cmb, brh, l: c im, a lg disk.
- 83 *pauciflorus*, w. Au. 2f. st si, 3 to 6-f: 1 li, so, of st sb, and sub-cl: pd ax and tm, 1-f: c and pd pu. Salt springs. 10 i.
- 84 *montanus*, A. p-b. 1 ln li, ss, en, silk-v, os 3-n, st e: brh 1-f: c hem, ln-li, a, e l.
- 85 *oblongifolius*, p. 2f. st l sca: 1 ln-ol, cls, not h: st sub-fs few-f brh: c hem, a, ol-li l. 1 f.
- 86 *sparsiflorus*, sub-g; 1 li, en, rx: st brh: brh exp, se, 1-f: scales inv c-p.
- 87 *heterophyllus*, 2f. 1 g; cau ones o, sub-cor, ac, sr, en at apex; brh ol-o, sub-sr; those of brh ln, rx-spr: st pn, g: c im.
- 88 *adulterinus*, y. p. 2f. 1 cls, ln; lower sub-sr, g; those of brh li sq: c squarrose, sh than disk: scales wd-li.
- 89 *perigrinus*, p-b. 2f. 1 ss, rt, ln-ol, a, g: st e, sub-si, g, hir top, 1 to 3-f at summit: scales of c ln-li, v, very a, lax, of lg of dk: rays nm.
- 90 *gracilis*, b. 2f. 1 ln-ol, rt gh-sr, a, cls, so, sca mr: st h, cmb at top: pd fi, 2 3-f; lt pd lg: c cy, im, li-ol, sub-a scales. Rays 12. 1 f.
- 91 *albus*, w. Au. 2f. si: f ft-cmb; pd, f bearing brh, na, 1-f: 1 ln-ol, en.

ASTRAG'ALUS. 16—10. 93. Gr. *astragalos*, name of leguminous plants. Milk-vetch.

1 *secundus*, A. p. Ju. 2f. prt: 1 o, pu: sk pd: le, straight, ac both ends.

2 *canadensis*, O. y. Ju. 2f. 1 2f g both sides: le sub-cy, in. On islands near Troy. 30 i.

3 *carolinianus*, A. y. Ju. 2f. e: 1 ol, pu, re be: sk pd: bt ln-li, lg of pd: pd, pd, and c pu: le o, beaked. 2—4 f. 1 ol 2f.

4 *alpinus*, A. p. Ju. 2f. prt. f pnd, r: le a at ends, h.

5 *pauciflorus*, p. de, c p-pilose: sti op, lower intire: 1 in 3 to 5 pa, ol, as pd sh 1, 2 to 4-f; f sml in lax r: bt pd: teeth of li c eq tube.

6 *adsurgens*, el, pr, g; 1 in 8 to 12 pa, ol: sti o, ac: pd lg l: sk ol; f e; banner lg wi: le c, 3 sided.

7 *succumbens*, hir in all parts: st prt, fl, ram: sti sml, ac: 1 in 5 pa, ob: r capitate: le fal. F large.

8 *diaphanus*, prt: 1 in 5 to 9 pa, ob: f capitate, lax: bt ac: le, sub-rx.

9 *lentiginosus*, prt, sub-g: 1 8-pa, ob: le o, ac, curved inf at base.

10 *inflatus*, prt, d-v: st fl: 19 or 10 pa, ot: le o, d, curved.

11 *gloriosus*, b. d: st sh, 5 i. 1 li-ol, in 6 pa: c lg-cy, with h. P.

12 *laxmanni*, b. J. 2f. st: cau bt ac: 1 sub-pu, ol, 6 to 8 pa pd ax tm.

13 *molissimus*, y-w. 2f. st-less, e, silk-d. sti, op to l: 1 li to 14.

14 *glaux*, ☼. hd pd, im, o: fe: le o, inflated. E.

15 *depressus*, 2f. sub-pe: 1 ob: r sh pe: le t, ln, rx.

16 *glabr*, w. Ap. g: 1 nm, sml, ov, fringed: sk 3 to 6 f, lg pd: S.

17 *obcordatus*, w. g: dc l sml, 15 to 19, obcor: pd lg, 8 to 12 f at top.

18 *carnosus*, b. p. J. st dc, h: 1 8 to 10 pa, ln-ol: sti o: r ax, lg of l: 2 f.

19 *galegaoides*, st sub-c: 1 21, ln-ol, sub-pu be: pd ax, lg l: sk crd: 2 f.

20 *hypoglotis*, st pe: 1 ol: sk o, pd, lg l: le e, o.

21 *gracilis*, 2f. pu: st e: 1 sub-ss; 1 ol-li, 13 to 21, rt, r pd, lg l: le sh.

22 *micranthus*, ☼. 2f. dc: 1 ov, em, g: pd 2-f, lg pe: le 2-ke, g: 7 i.

ATHEROP'OGON. 3—2. 10. Gr. *athēr*, a bristle, and *pogon*, a beard.

1 *ajludoides*, 2f. sk sh, nm, 20 to 40, rx: culm t, g: 1 h at base: she h.

2 *oligostachyum*, 2f. sk 2 or 3, sub-tm, my-: c co pilose: va of co awn.

ATRAG'ENE. 12—13. 61. Gr. *athragene*, Theophrastus for Clematis.

1 *americana*, O. b-p. M. 2f. st cli, 6-an: 1 in 4 ter, cli pe: 1 g, hr-o, ac.

ATRE'MA. 5—2. 60. Gr. a, without, and *tremæ*, a hole.

1 *americana*, st fur: 1 my-cleft li div: u 5 to 8 rayed.

A'TRIPLEX. 5—2. 29. Lat. *atriplex*, dark color. Orache.

1 *halimus*, h 1 al or op, ol-sub-rh.

2 *hortensis*, Ju. ☼. st e, her: 1 tri, to, of uniform cl: c of fru o, en. 3 f.

3 *laciniata*, J. ☼. st e, her: 1 trian, to, white be: fru rh, 3-n.

4 *arcuaria*, Ju. ☼. st her: spr: 1 en, ol-o, sub-ss, white be; up a ac.

5 *patula*, Ap. ♂. st her, spr: 1 trian, so ab, to; up en: fru c sub-m ou

6 *hastata*, Ju. ☼. st e, her: 1 trian, to, uniform cl: c of fru sin-to.

7 *angustifolia*, J. ☼. st her, divar; lower l to; up ln, en: c of fru ln. ha.

8 *canescens*, st shrubby: 1 ol-li. en, ot, ta toward base; young l a. 3 f.

9 *argentea*, ☼. st her, c: 1 delt, sub-cor, sub-ot, en, gl fru pe. 1 f.

A'TROPA. 5—1. 38. *Atropos*, one of the three fates. Nightshade 2.

1 *physaloides*, w-b. Ju. ☼. st brh: c m, 5-an, net-ve; ber cov with c.

2 *belladonna*, w-y. 2f. st her: 1 o, en. Ber black. E.

AULAXAN'THUS. 3—2. 10. Gr. *aulax*, a furrow, and *anthos*, flower.

1 *ciliatus*, E. 2f? st e: 1 li, cil: pn com. 2 f.

2 *rufus*, Au. st e: 1 g: pn lr, com: h on c yellow.

AVE'NA. 3—2. 10. Lat. *arceo*, to covet. Oats 4.

1 *praecox*, J. ☉. pn dense r: flg asc: awn ex: lse. 4 i.

2 *mollis*, r in com sk: c 2-f: fawned, beardless—awns of lg of f: l culm h.

3 *striata*, A. pn com, few-f: c 5-f: flg c, b-less: va striate, lg awn back.

4 *sativa*, J. ☉. pn: c 2-seed: so, one awned. E.

5 *sterilis*, Ju. ☉. pn: c 5-f: f h, middle awnless. Ani-ated oats.

6 *elatior*, J. 2f. pn sub-nod: glu 2-f: f per, sub-awnless, s awned: culm fl.

AVICEN'NIA. 13—2. 45. Avicenna, an Arabic physician. Mangle.

1 *tomentosa*, h. l ol, ot, tom be. F in sub-ss clusters. 20. S.

AZA'LEA. 5—1. 50. Gr. *azaleos*, dry. Honey-suckle.

1 *procumbens*, r. Ju. h. l-f: brh prt: l op, g: mr n: co bl, g: fi enclosed.

2 *calendulacea*, r. & y. Ap. h. sub-na-f: l ol, pu, full grown rough h: f l r, not visc: teeth of c ol: co hir tube sh di.

3 *cenescens*, r. J. h. sub-na-f: l ob-ol, pu on up side, d be; n not brs: f not vis: tube of co sh di: teeth brs c sh, rd-ot: s ex.

4 *arborescens*, r. h. fl: l ob, sub-ot so, gla be, cil on mr; n so: tubes lg seg: c l, ol a seg: fi ex. 15 f.

5 *hispida*, w. r. Ju. h. fl: brh his: l lg-ln, his ab, so be, gl, n brs be: mr cil: f viscous; tube lg than seg.

6 *nudiflora*, O. r. M. h. sub-n-f: l ln ol, or oval, so pu: n up side d-be brs; mr cil: f my; tubes lg div: teeth c sh, ov, sub-rd: s ex.

7 *nitida*, w. J. h. l-f: brh so: l few, obln. g both sides, and up.

8 *riscosa*, O. w. J. h. l-f: brh his: l ol-ob, a, both sides g one cl: n brs f viscous; tube twice lg as di: te of c sh rd: fi lg than co. 5 f.

9 *glauea*, w. J. h. l-f: brh his: l obln, a, both sides g, gl be; n brs-bea: f visc tube of co lg di: c sh: fi eq to di of co. S.

10 *bicolor*, r. w. M. h. na f: l ob, on both sides h; n not brs: f sml, not visc; tube lg seg co: c sh; one seg nr, and 4-times lg: filg tube sml brh h. 2—8 f.

AZOL'LA. 21—1. 5. Gr. *azo*, to make dry, *allo*, (*ollumi*,) to kill.

1 *caroliniana*, l distichous, im; o-ol, ot, spr. Floating, l red be.

BAC'CHARIS. 17—2. 55. Bacchus, to whom dedicated. Groundsel.

1 *halimifolia*, w. S. h. l ob, gh-to ab: pn com, l: fas pd. 6—12 f. S.

2 *angustifolia*, g: l li, very en: pn com, my-f. 8—10 f. S.

3 *sessiliflora*, l so, cu ob, to. lid ax, ss, sc. 3—5 f. S.

BALDUIN'A. 17—3. 55. Dr. Wm Baldwin, of Geo.

1 *uniflora*, y. Ju. 2f. st l-f, si, pu: l nr, ob, en: egret lg as seed. 2 f. S.

2 *multiflora*, y 2f? st brh, my-f, g: l li; l of inv ac: egret sh, cup-form. 30 i. S.

BALLO'TA. 13—1. 42. Gr. *ballō*, to send forth, and *ous*, (*otos*,) the ear. False motherwort.

1 *nigra*, 2f. l hr, undi, sr: l of c ac. E.

BALTIMO'RA. 17—4. 55. Lord Baltimore.

1 *recta*, y. Ju. ☉. st dic: l op, o, ac, sr, pe. S.

BAPTI'SIA. 10—1. 93. Gr. *baptō*, to dye. Wild indigo l.

1 *tinctoria*, O. y. Ju. 2f. g and brh: l ter, sub-ss: l wd-ob, rd ot, sti os, ob, a. sh than pe: r tm: le ò, lg-sti. 3 f.

2 *carulea*, sk, b. Ju. 2f. g: l ter; sh-pe; l ol-wd, ot: sti ln, a, twice lg as pe: r sk, el: le ac.

3 *alba*, O. w. J. 2f. brh spr: l ter, pe; l ln, wd at base, ot, m, g: sti sb, sh than pe: r tm. 2 f. S.

4 *perfoliata*, y. Ju. 2f. g: l ov, en, glau: fax, sl, l-f: le sub-glo. S.

- 5 *lanceolata*, y. Ap. 2f. pu: l ter, cu, ln, ot: fax, sl; the tm ones r. 1—2 f.
- 6 *villosa*, y-w. J. 2f. l ter, ln, h: st and c v: sti li: r tm.
- 7 *mollis*, 2f. st, l and c h: l ter; l ln-rh: sti l, ln: r in tm sk: te of c a.
- 8 *bracteata*, O. w. Ap. pu: brh spr: l ter. pe; l ln: r ax, bt lg, br-sb. 2 f.
- BARBARE'A. 14—2. 63. St. Barbary. Water radish l.
- 1 *vulgaris*, O. y. M. 2f. lower l pnt, with tm lo rd; up l ob, to.
- 2 *precox*, 2f. lower l ly, tm o-lo, up deeply pnt, li ol tm-lo.
- BARTO'NIA. 4—1. 46. Dr. B. S. Barton. screwstem.
- 1 *paniculata*, O. w. Ju. ☼. st sub-rm, 4-sided: pd op, lower rm. 5—6 i.
- BART'SIA. 13—2. 36. D. Bartseh. See *Euchroma*. False painted cup.
- 1 *pallida*, w-y. Au. 2f. l al, li: up ones ln: f sub-ov. sub-to at summit; all are 3-n: te of ca a.
- 2 *acuminata*, 2f. l al, lg-li; f l o, lg-ac, 3-n, all undi: f sh than bt: te of c a.
- 3 *tenuifolia*, y. Ju. 2f. hir; l al, li, gh-pnt; di fi: bt ol, ot, to-hastate at base on each side, lg than f: c sh, h, with sb te. 1 f.
- 4 *alpina*, p. Ju. 2f. l op, o, sub-cor, ot-ser, rg: anthers hir. 6 i.
- 5 *gymnandra*, b. 2f. l sub-op, o, cre; a pair rad ones pe: sk ol; wr bt cp.
- BAT'SCHIA. 5—1. 43. J. G. Batsch, of Jena. False bugloss. 1.
- 1 *candescens*, O. y. Ju. 2f. v: l ol: c very sh: di of co en.
- 2 *gmclini*, r-y. Ap. 2f. hir; f l o: seg of c lg sub-ln. 10—16 i. S.
- 3 *longiflora*, y. Ju. 2f. hir, e: l apx, lg-li: mr rx: fas fs: tube of co sub-pentan: border flat, fringed crenatures. S.
- 4 *decumbens*, hir: st dc: seg of c and l li: f sc: lo of co fringed-cre, sh than tube.
- BECKMAN'NIA. 3—2. 10. Prof. Beckmann.
- 1 *crucaciformis*, Ju. pn 2-rowed, l-sided, li: c l or 2-f, sca mr: st hir. S.
- BEJA'RIA. 12—1. 50. Bejar, a Spanish botanist.
- 1 *racemosa*, w-r. J. h. l ln-o, g: f r-pn, tm: st his. 3 f. S.
- BEL' LIS. 17—2. 55. Lat. *bellus*, handsome. Daisy.
- 1 *percnis*, w. p. Ap. 2f. l ob, cre: sep na, 1-f. E.
- 2 *integrifolia*, cau: spr-brh, l en; lower ones ob; up ln: l of c a and ac. S.
- BER'BERIS. 6—1. 78. The Arabic name. Barberry.
- 1 *vulgaris*, y. M. h. brh punctate: pk, in threes: l ob, ser: f r.
- 2 *pinnata*, y. Ap. h. w arm: l pnt; l in three pa, ol, re-to, ve: pe 2-to.
- 3 *nerrosa*, y. Ap. h. w arm: l pnt; l 6-pa, o-ol, re-sr, sm 5-n: pe en.
- 4 *aquifolia*, l in 2 and 3 pa, lower pa distant from base of pe; l o, near each other, sp-to, cor at base, 1-u: r e: fi 2-to.
- BE'TA. 5—2. 29. Gr. letter *Beta*, which its seed resembles. Beet.
- 1 *vulgaris*, g. Au. ♂. f heaped: lower l o. E.
- 2 *cicla*, ♂. f in threes: rad l pe, cau ones ss: lt sk lg.
- BET'ULA. 19—12. 99. *betula*, Lat. Birch,
- 1 *popul folia*, Ju. h. l lg-ac, uneq sr, very g: scales of strobile rd lo.
- 2 *excelsa*, O. J. h. l o, a, sr: pe pu, sh pd? scales of strobile rd lt lo. 70 f.
- 3 *rubra*, h. l rh-o, sr, a, pu be, base en: p am o: scales v: di li, eq. 70 f.
- 4 *papyracea*, h. l o, ac, doubly-sr: ve hir be: pe g: p am pd, no.
- 5 *lenta*, O. M. h. l ht-o, sr ac: n pe pilose be: scales strobile g. 80 f.
- 6 *glandulosa*, M. h. brh gld, g: l ob, sr, at base en, g, sub-ss. 2—8 f.

- 7 *nana*, M. $\frac{1}{2}$. sml g: 1 sml, wd-or, gh-cre, ve be: scales of am 3-par.
 8 *pu'mila*, O. J. $\frac{1}{2}$. brh pu, 1 or-ob, pe, pu be: p am cy. 2—3 f.
 Bi'DENS. 17—3. 55. Lat. *bis*, two, and *dens*, tooth. Beggar ticks.
 1 *cernua*, O. y. Au. \odot . f sub-rayed: c lg f: 1 ln, sub-cn, to.
 2 *chrysanthemoides*, O. y. Au. \odot . f drooping rays c, lg sub-eq c, 1 ol.
 3 *tripartita*, Au. \odot . f d: c lg f: seed 3 awns: 1 3-cleft. 3 f.
 4 *frondosa*, O. y. Ju. \odot . f d: c 6 times lg as f: 1 cil at base; 1 pnt.
 5 *connata*, y. Ju. \odot . f d: outer c 3 as lg as f: cau l ter: 1 l en; f ol ln.
 6 *pilosa*, Ju. \odot . f d: outer c of lg of inner: lower l pnt; up ter: 1 ol.
 7 *bipinnata*, y. Ju. \odot . f sub-ra: outer c lg of inner: 1 2-pnt; 1 ln, pnt.
 8 *beckii*, Au. y. $\frac{1}{2}$. sub l cap, di into my pa, dic: f c, tm, sl.
 9 *gracilis*, y. $\frac{1}{2}$. g: 1 pnt-5-cleft: di nr-li, en: st sub-ram, e: f tm. 2 f.
 BIGNO'NIA. 13—2. 40. Abbe Bignon. Trumpet flower.
 1 *radicans*, O. r. & y. Ju. $\frac{1}{2}$. 1 pnt: 1 o, to, ac: cmb tm: tube co 3 lg c.
 2 *crucig'era*, y-r. J. $\frac{1}{2}$. 1 conjugate; lower ter: 1 hr-o, ac: r ax: st m. S.
 3 *capreolata*, r. March. $\frac{1}{2}$. 1 conj, lower ter: 1 ter, cor, ac: rax: st rough.
 BLECH'NUM. 21—1. 5. Gr. *Blechnon*, fern. Roman fern l.
 1 *borealis*, Au. $\frac{1}{2}$. barren fr pnt; di ln, ot, parallel: fer fr pnt- 1 li, ac.
 2 *serrulatum*, $\frac{1}{2}$. fr pnt: 1 ln, ta to both ends, at base de, sharp-sr.
 3 *virginicum*, fr pnt; 1 my-cleft, ln, ss, pnt, a, di ot, quite en. S.
 4 *radicans*, fr bipnt; 1 ln, cre, ss, at base, sr with a fine callus, ac, ve be.
 BLET'IA. 18—1. 21. Louis Blet.
 1 *aphylla*, y. r. Au. $\frac{1}{2}$. 1-less: sep t, scaly, ta near: scales o, al. 18i. S.
 2 *recreunda*, Ju. $\frac{1}{2}$. rad l br-ln, n: sep my-f: inner pt converg.
 BLI'TUM. 1—2. 29. Gr. *bliton*, insipid. Strawberry blight.
 1 *capitatum*, O. r. J. \odot . hd in a tm sk, not intermixed with l: 1 trian.
 2 *virgatum*, r. J. \odot . lt hd se, top ones l: 1 trian-to.
 3 *maritimum*, $\frac{1}{2}$? c ax, sk, na: 1 ln, ta to each end, gh-to. 2—3 f.
 4 *chenopodioides*, \odot . 1 sub-trian, sub-to, ta to ends: glan ax, l, seed pt. S.
 BÆBE'RA. 17—2. 55. Bæber, a Russian.
 1 *chrysanthemoides*, y. Au. \odot . st pn: 1 op. sub-pnt, g, a. S.
 BÆHME'RIA. 19—4. 98. In honor of Böhmer, a German. False nettle.
 1 *cylindrica*, O. g. Ju. $\frac{1}{2}$. 1 op, o-ol, ac, to, g: f sub-diæ: s sk glm. 18 i.
 2 *lateriflora*, Ju. $\frac{1}{2}$. 1 al, o-ln, ac, sr, rough. f lt: st her. 1 3-n, on pe.
 BOERHAA'VIA. 3—1. 32. Boerhave.
 1 *erecta*, w. p. J. $\frac{1}{2}$. st tric, so ab: f in cmb pn. S.
 BOLTO'NIA. 17—2. 55. Js. Bolton, naturalist, and artist. False aster.
 1 *asteroides*, w-r. Au. $\frac{1}{2}$. 1 very en: f lg-pd: seed ov, g.
 2 *glastifolia*, w. Ju. $\frac{1}{2}$. lower l sr; f sh-pd: seeds obcor, wi pu.
 3 *diffusa*, w. y. S. $\frac{1}{2}$? 1 ln-li, mr sca: pn diffuse, my-f: seed ob, em. S.
 BOOT'IA. 11—13. 92. Francis Boott, of Boston.
 1 *sylvestris*, w. J. $\frac{1}{2}$. h d: st e, fur: lower l pnt; 1 ss, ov, 2-to: f cmb.
 BORA'GO. 5—1. 43. *bor*, heart, and *ago*, to affect.
 1 *officinalis*, b. Ju. \odot . 1 al: c spr. E.
 2 *africana*, \odot . 1 op, pe, o: pd my-f.
 BORKHAU'SIA. 17—1. 53. M. Borkhausen.
 1 *caroliniana*, y. $\frac{1}{2}$? 1 ln-ol, g, rarely to, sm pnt: st e, few-f; pd lg. 2 f.
 BO'RYA. 20.—2. 96. M. Bory de St. Vincent.
 1 *porulosa*, 1 ln-ol, ot, ss, cr, dotted on side; mr re.
 2 *acuminata*, 1 ln-ov, ta each end, pe mem.
 BOTRY'CHUM. 21—1. 5. Gr. *botrus*, a bunch of grapes. Grape fern.
 1 *fumarivoides*, J. $\frac{1}{2}$. sep na: fr g, rad, 3-par, 2-pnt; 1 lunate, cre: sk pnt.

- 2 *obliquum*, Ju. sep 1-fr: fr sub-biter; 1 ol-lu, ser, dilated at base, hr.
 3 *dissectum*, sep below, 1-fr: fr 3-par, 2-pnt; di li, 2-par, at apex 2-to.
 4 *virginicum*, O. J. Ju. hir: sep in the middle fr: fr sub-ter, 3-par.
 5 *gracile*, g: sep in middle fr: fr 3-par, 2-pnt; di gh-sub-pnt, a, sub-to
 6 *simplex*, J. g. sep below, 1-fr: fr si, 3-lo or 3-cleft: seg uneq.
 BRA'CHYELY'TRUM. 3—2. 10. Gr. *brachus*, short, and *clutron*, sheath.
 1 *erectum*, Ju. 2f. pu: culm si: pn with few brh.
 BRACHY'RIS. 17—2. 55. Gr. *brachus*, short, and *acheiron*, a chaffy scale.
 1 *sarothrae*, y. 2f. st nm, an, sca, na below, emb ab: brh few-f at top. S.
 BRAS'SICA. 14—2. 63. Gr. *brasso*, to boil. Cabbage.
 1 *orientalis*, ♂. 1 hr, cls, g; rad ones en: silique 4-sided. E.
 2 *napus*, ♂. ro cau, fu: 1 so; up ones hr-lu, cls: low ones ly-to.
 3 *rapa*, ♂. ro cau, or, dc fleshy: rad lrg; cau en, so.
 4 *oleracea*, ♂. ro cau, t fleshy: 1 so, gl, re-lo.
 BRAY'A. 14—2. 63. Count Bray.
 1 *alpina*, 2f. 1 g: sep scarcely l: bt-hearing, r ct.
 BRICKELL'IA. 17—1. 54. Dr. Brickell.
 1 *cardifolia*, p. Au. lower l cor, ac, pu; up ot: inv my-f: co tubular.
 BRI'ZA. 3—2. 10. Gr. *britho*, to nod. Rattle-snake grass.
 1 *media*, J. 2f. pu c: sk lr-o, 7-f: c sm f. 1 f.
 2 *maxima*, ♂. sk cor, with 17 f in each, c chesnut-brown. E.
 BROMÆ'A. 6—1. 16. James Brodie.
 1 *grandiflora*, Ap. 2f. u my-f: f pd: s al, with mem mr.
 BRO'MUS. 3—2. 10. Gr. *bromos*, wild oats. Chess, broom-grass.
 1 *secalinus*, O. J. ☼. pu no: sk o, ep: glu na, awns sh, sb, straitish.
 2 *ciliatus*, 2f. pn no: sk ol. ep, 6 to 8-f: f awned at nr, cil-v.
 3 *pubescens*, J. 2f. culm h below: sh pn no, pu: c less co, 8 to 12 f.
 4 *purpureus*, Au. 2f. pn no: sk lu, t: f awned, awns e: 1 g both sides.
 5 *mollis*, Ju. pn e, pd ram: sk o: f im, depressed, n, pu: brst lg as c o.
 6 *altissimus*, J. 2f. pn no, sk ol, 6-f: f pu: outer va 3-n. 1 f. S.
 BROUSSONET'IA. 20—4. 98. Broussonnet. Paper mulberry.
 1 *papyrifera*, ♂. 1 sub-cor, lo or undi: ro sg off-suckers. 20 f.
 BRUNN'CHIA. 8—3. 28. Brunnich.
 1 *cirrhosa*, 2f. climb: l cor, a, g, en: pn tm: bt o, mucronate. S.
 BUCHNE'RA. 13—2. 35. John Godfrey Buchner. Blue hearts.
 1 *americana*, O. b. Au. 2f. st si: 1 lu sub-dt, 3-n; f re, sk.
 BUMEL'IA. 4—1. 48. Gr. *boumelia*.
 1 *lycoides*, g-w. M. ♂. sp c: 1 br-lu, so both sides. S.
 2 *reclinata*, J. ♂. sp spr: sterile brh spr; 1 sm, ob, so.
 3 *laevigata*, g-y. J. ♂. sp: brh h; 1 lu-ov, woolly un side. 10 f.
 4 *torreana*, g-y. ♂. sp: 1 lu-wd, ot d be. 25 f.
 5 *oblongifolia*, ♂. sp: 1 ol-o, ot, nr at base, h be: f sub-ss, nm: seg 3-cleft.
 BU'NIAS. 14—1. 63. Gr. *bounos*, a little hill. Sea rocket.
 1 *maritima*, p. Ju. ☼. 1 wd-ol, ot, sin-to: joints of silicle 1-seeded; up o.
 2 *dentata*, Ju. ☼. 1 ob, sin: silicle with 2 so, 1-seeded, to-less joints.
 BUPHTHAL'MUM. 17—2. 55. Gr. *bous*, a bull, and *ophthalmos*, the eye.
 Ox-eye.
 1 *frutescens*, y. J. ♂. 1 op, wd-lu, whitish: pe 2-to. 2 f. S.
 2 *angustifolium*, 2f. 1 al, li, br near summit, en, g: inv a, lu, l.
 3 *sagittatum*, T. J. 2f. tom: rad 1 lg-pe, ol sagittate, en, 3-n; cau ol, ta.
 BUPLEU'RUM. 5—2. 60. Gr. *bous*, ox, *pleuron*, rib or side.
 1 *rotundifolium*, y. J. ☼. 1 si pr. inv none. 2 f. E. Thorough wax.

Bux'us. 19—4. 96. Gr. *puxos*, of *pukazō*, to thicken or make hard.

1 *sempervirens*, h. l o, pe, h at mr: anthers o, ar. E. Box.

CACA'LIA. 17—1. 55. Gr. *kakalia*, a name by Theophrastus. Wild caraway.

1 *surcolens*, w. Au. 2f. st her: l pe, sr, g, green on sides: f cmb, e. 3 f.

2 *atriplicifolia*, w. Au. 2f. st her: l pe, g, gl be; rad cor, to; cau rh.

3 *reniformis*, w. Au. 2f. st her: l pe, g be, pilose at ve; rad hr; cau to.

4 *ovata*, w. S—Oc. st her: l o, ot to, n, glau be; lower pe: inv 5-l. S.

5 *lanccolâta*, y-w. st her: l nr ln, a at each end, to, n, gla be. 4—6 f.

6 *tuberosa*, ro tu: st her: l pe, o, ot, 5-n, en: f crmb, sub-fs: c na, 5-f.

CAC'TUS. 11—1. 85. Gr. *kaktos*, prickly pear.

1 *opuntia*, y. J. 2f. cp, o: brs fas.

2 *riverparus*, r. Ju. 2f. id, ces: tubercles cy, b, ab the fur. S.

3 *mammillaris*, tubercles o, t, b: f ex: ber scarlet eq tubercles.

4 *ferox*, y. & r. Ju. lg spi; spi double; lg rad: fru dry, sp.

5 *fragilis*, sh, ol, sm t, sp double: f sl, sml: fru dry sp.

6 *cylindricus*, p. h. brh: tm brh lg cy articulations.

CALA'DIUM. 19—12. 7. some kinds of Arum.

1 *glaucum*, J. ♂. st-less: gl, hastate-cor, ac; lo ol, ot: spa summit ov.

CAL'AMAGROS'TIS. 3—2. 10. G. *kalamos*, a reed, and *agrostis*, grass.

1 *coarctata*, Ju. 2f. pn sk, c lg than co, ca: lg than egret, awned below.

CALAMIN'THA. 13—1. 42. Gr. *calamos*, a reed, and *mintha*, mint.

1 *nepeta*, r-w. J. 2f. pu, brh: l o, ot, sub-sr: wr pd, dic-cmb, lg than l.

2 *grandiflora*, i. Ju. l o, ot, cre, so: wr my-f, on sh pd, sh l. 12—18 i.

CALEN'DULA. 17—4. 54. Lat. *calendæ*, the first day of every month.

1 *officinalis*, y. ☼. seed ke, m, incurved. E.

CAL'LA. 19—12. 7. Gr. *kallos*, beauty. Water arum.

1 *palustris*, O. w. J. 2f. l sub-rd, hr, a: spa o, cuspidate, spr.

CAL'LICAR'PA. 4—1. 41. Gr. *kallos*, beauty, and *karpos*, fruit.

1 *americana*, r. J. l sr, tom un-neath. 3 f. S.

CAL'LIGO'NUM. 12—4. 28. Gr. *kallos*, beauty, and *gone*, joint.

1 *canescens*, J. h. dio, l ln: f in ax glo, sk ends brh: fru wi. S.

CAL'LITRI'CHE. 1—2. 88. Gr. *kallos*, beauty, and *trix*, (*trichos*,) hair.

1 *terna*, O. w. ☼. up l spt-ob; lower li, ot: f pol: mr of cap ot.

2 *autumnalis*, Au. ☼. l li, 1-n, em: cap with an a mr: f per. S.

3 *teristris*, Ju. ☼. prt, diffuse: l ol, uniform, ot: cap grooved mr.

CA'LOCHOR'TUS. 6—3. 14. Gr. *kallos*, beautiful, *chortos*, fodder.

1 *elegans*, w. & p. 2f. sep n 3-f, sh single l: pt woolly with r. S

CAL'THA. 12—13. 61. Gr. *kalathos*, a basket. Cowslip.

1 *palustris*, O. y. Ap. 2f. ste: l cor, sub-or, a-cre. 12—18 i.

2 *integer'rima*, y. 2f. st e, cmb: l en, with a closed sinus, or-hr: fl ss.

3 *parnassifolia*, y. J. 2f. st e, l-f, l-l: rad l hr-o, ot, tew-to, my-n.

4 *flabellifolia*, y. J. 2f. st prt: l spr-ren: lo spr, a sharp: pd ax, sl, 1-f.

5 *natans*, w. 2f. st prt, floating: l hr-ren, cre; lo apx; behind os cre.

6 *sagittata*, w. sep l-f: l o, ot, en, hr-sagittate at base, auricles ab.

CALYCAN'THUS. 11—13. 92. Gr. *kalux*, a calyx, and *anthos*, a flower.

Carolina allspice.

1 *laxigatus*, p. M. h. seg e ln: l ol or ov, ac, sm rg, so and green.

2 *floridus*, p. M. h. di of e ln: l br-ov, a, tom b: brh spr. 3—7 f. S.

3 *inodorus*, Ap. h. seg of e li-ln, pu: l ln, sca and shining p, up so. 4—6 f.

4 *glaucus*, J. h. seg of e ln: l ln, lg ac, gl be: brh spr. 6—8 f.

CALYME'NIA. 3—1. 32. Gr. *kalux*, a calyx and *umen*, a membrane.

1 *decumbeus*, r. J. st rd, dc: l en, nr, ss: pd ax.

CALYP'SO. 18—1. 21. Gr. *kalupto*, to conceal.

1 *americana*, lip nr, sub-unguiculate at base: spur 2-cleft: di a: pd lg gm.

2 *borealis*, p-r. J. 2f. rad l si, rd-o, n: sep 1-f, she.

CAMELI'NA. 14—1. 63. Old French name. Mad wort.

1 *sati'va*, y. J. ☼. silicle ob, py, nr, tipped with pointed style; l sub-en.

CAMPAN'ULA. 5—1. 52. Lat. *campanula*, a little bell. Bell flower.

1 *rotundifolia*, O. b. J. 2f. g: rad l hr-ren, crc: cau li, cn: pn lax, few-f.

2 *amplexicaulis*, O. b. M. ☼. st si, c: l hr, cre, cl: f ax, ss, glui. 12--18 i.

3 *americana*, b-w. Au. 2f. l o-ln, lg-ac: lower sub-cor, with pe cil: f ax.

4 *acuminata*, b-w. Ju. 2f. so, c: l o-ln, ending in a lg ac point, sub-sr.

5 *erinoides*, O. w. b. J. ☼. st si, an: an mr n of l pk: l li-ln, g on up side.

6 *nitida*, b. Ju. 2f. g: rad l ol-spt, cr, cre; cau ln-ol, sub-en: fr: eo bl.

7 *uniflora*, pu: rad l rd-ob: cau ln-li, sn to: st about 1-f.

8 *medium*, w. b. Au. ♂. cps 5 cell: st undi, c, l: f e. E.

9 *speculum*, b. Au. ☼. st brh, l ol, sub-cre: f sl, scales at base w.

10 *lanuginosa*, l o, ig, cre, ta into the pe: st si: f sub-ss, c, spr.

11 *divaricata*, b. Au. 2f. l ln, a, with lg ser, g: pn expanding: f no. 2 f. S.

CAMP'PHOROS'MA. 4—1. 29. Lat. *Camphora*, camphor, and Gr. *osme*.

1 *glabra*, 2f. 13-sided, g, unarmed. S.

CAN'NA. 1—1. 20. Celtic word *can*, a reed or mat.

1 *flac'cida*, y. J. 2f. co 3-cleft; seg flaccid. 2—3 f. S.

2 *angustifolia*, r. Au. 2f. l pe, ln, ribbed: interior limb of co 3-cleft.

CAN'NABIS. 20—5. 98. Gr. *kannabis*, hemp.

1 *satira*, g. Au. ☼. st pilose: l pe, dg, l ln, ser, pilose: s f sl, ax, p sk. E.

CAN'TUA. 5—1. 35. Peruvian name.

1 *longiflora*, very g: l put: f tm, lax-cmb pn, pd: tube of co lg, tubular.

2 *pungens*, l dg, sub-fas; di sb, pungent: di of co ob, ot.

3 *coronopifolia*, O. r. y. Ju. ♂? l put: f tm, pd, in loose r: c 3 as lg c. S.

4 *aggrega'ta*, r. J. ♂. pu: l put: f tm and lt, so in hd, sub-ss: di co nr.

5 *parriflora*, b. J. ☼. pu, diffuse: l put; di lg-li: pd sl, 1-f, tm, opl.

CAPRA'RIA. 13—2. 37. Lat. *capra*, a goat.

1 *pusilla*, J. w. ☼. h: l op, cor, re-to, pe: pd ax, lg pe.

2 *multiflora*, g-w. Ju. ☼. e, viscid-h: up l 3 in a wr, iny-cleft: pd sl. S.

3 *biflora*, 2f. l al, o, sr: f pa.

CAPSICUM. 5—1. 33. Gr. *kaptō*, to bite. Cayenne pepper.

1 *annuum*, y-g. w. Au. ☼. st her: pd sl. 10—18 i. E.

2 *baccatum*, h. st so: pd in pa. S

CARDAM'INE. 14—2. 63. Gr. *kardia*, the heart, and *damaō*, to tame. Water cress.

1 *bellidifolia*, w. 2f. l si, rd-o, en: pe lg: f-bearing st lg as l.

2 *rotundifolia*, w. 2f. l sub-or, cn, so, pe: st si, prt. 9—15 i.

3 *rhomboidea*, O. w. M. 2f. l rh-o, os to, g; rd, lg-pc: ro tuberous. 15 i.

4 *articulata*, 2f. st na: l rad, gh-to, g: siliques thick, sub jt.

5 *teres*, w. J. 2f. sml, e, ram: l all sub-ly-put: silique sh, t, ac.

6 *pennsylvanica*, O. w. 2f. g, brh: l pnt: l ol, ot, lower l br to-an l. 12 i.


7 *pretensis*, O. r-p. 2f. si, g, e: l pnt; rad l rd, to; cau ln, sub-en.

8 *virginica*, w. 2f. g, c: l pnt; l ln, sub-au: silique lg, e. 5—8 i.

9 *hirsuta*, ☼. l pnt, h. l of rad ones rd, pc: up ol, snb-ss: pe ol.

10 *spathulata*, w. Ap. ☼? sml: st dc: ro l spt, pu; cau nr, cu en, to. S.

11 *uniflora*, st less sl: l ot ly-pnt: pd rad, 1-f.

- 12 *multifida*, 2f. h, brh: 1 int pnt; 1 2-pnt, rd gh di: silique sh.
 CAR'DIOSPER'MUM. 8—?. 65. Gr. *kardia*, the heart and *sperma* seed.
 1 *haleæabum*, O. Au.  g: 1 inc and lo; tun one rh. S.
 CAR'DUUS. 17—1. 54. Applied to prickly plants, used to card wool.
 Comb thistle.
 1 *pectinatus*, p. ♂. warm: 1 dc, ln, pnt: pd l-less, tm, lg, 1-f: f no.
 CA'REX. 19—3. 9. Lat. *carere*, to want. Sedge.
 1 *wormskiol liana*, J. 2f. sk si, si: 1 flat: fru-bearing sk sm with 3 sti, ol,
 a, cy, im: fru o and sub-o, sh beaked, h, eq o a scsle.
 2 *exilis*, 2f. sk si: 1 3-sided, brs: fru sk s below, sub-dense-f, si: fru ln-
 o, div, sca at mr; scale lg than fru, o, a. 16 i.
 3 *sterilis*, O. M. 2f. sk in fives, ss, apx: fru o, ac sm beak sub-2-cleft,
 3-sided cp, sca at mr; eq o a scale. 8 i.
 4 *bromoides*, O. M. 2f. sk my, al, ol, c, up s below, others p, ab and
 below s in mid, fru c, lu. 14 i.
 5 *cephalophora*, 2f. sk o, sub in fives, threes, or sevens, bt: fru o, ac, cp,
 bifid, mr sca, eq sml sca scales. 20 i.
 6 *rosea*, O. M. 2f. sk sub in fours, al, rt, ss, lower with lg se bt: fru ln
 ol, convex ab, mr sca, 2-to, div, twice lg o ot scale. 12 i.
 7 *retroflæa*, O. M. 2f. sk fours, al, o, sub-ss, bt: fru o, a, 2-to, mr g sca,
 spr, eq o a scale. 12 i.
 8 *muhlenbergii*, 2f. sk al sub in fives, ot, s ab: fru o, cp, n, 2-cleft, mr
 sca, sub-di, a little sh than o scale. 15 i.
 9 *stipata*, O. M. 2f. sk dec: sk nm, ol, ag, bt: fru ln-o, t at base, sca at
 mr, n, bifid, div, twice as lg as ln-o scale. 2 f.
 10 *multiflora*, M. 2f. sk al, apx, bt, ss; sk ol-o, ot, bt: fru o, ac ep, im,
 bifid, 3-n, div, sml o scale: fru cp or ac, sml. 20 i.
 11 *sparganoides*, M. 2f. sk sub in eights, o, bt: fru o, cp, sca at mr, div,
 ac, 2-to, twice as lg as o, scale. 20 i.
 12 *disper'ma*, O. M. 2f. sk sub in threes, sub-apx, e, lower one bt: fru o,
 ot, n, g, twice as lg as o, a, scale. 10 i.
 13 *setacea*, J. 2f. sk ss, al, apx, bt; sk o, ot, bt: fru ln-o ae, ep, bifid, di,
 about eq to ln-o awn scale. 2 f.
 14 *paniculata*, O. M. 2f. sk sm die, o, pn: fru ln-o, ac, n, 2-to, cil-sr at
 mr, g at base, sh than o, a, ac scale. 2 f.
 15 *teretius'cula*, 2f. sk twice com; sk clust: fru spr: st rd. Sm die pol.
 16 *muricata*, M. 2f. sk bom; sk sub in sixes, o, ss, apx; fru o ol-o, ac,
 div, bifid, sca at mr, twice lg as o scale, or eq to ln-o one. 1 f.
 17 *bicolor*, 2f. sk in threes, o, sub-ss, e: fru ob, ot, sub-cp: scale o, ot.
 6 i.
 18 *loliacea*, 2f. sk in threes, few-f, ss: fru ov or o, ot, sub-cp, spr, n, en
 at orifice, 2 lg as a, o scale.
 19 *deweyi*, J. 2f. sk sub in threes, ss, o, al, sub-distant, up one w bt: fru
 ln-ol, ac, 2-forked, sub-sca mr, lg than ln-ol, sh-awned scale. 3 f.
 20 *trisperma*, J. 2f. sk in threes, al, ss, o; up one w bt: fru ol, a, en at
 orifice, my-n, sub-sca at apex, sub spr, lg ol, a scale 20 i.
 21 *scoparia*, 2f. sk al, o, ss, in fives; lower caducous bt: cps ln, n, g, e,
 lg than ln ac scale. 20 i.
 22 *lagopodioides*, M. 2f. sk crd, nm, scales sml: cps ov-ol, ac, spr, mr;
 orifice 2-to. 2 f.
 23 *straminea*, 2f. sk cp; sk sub in sixes, o, ol, al, ss, sub-apx: fru br-o,
 rd, cp, wi, cil-sr, n, 2-to, lg ln-c scale. Fru sh-o lg than scale. 18 i.
 24 *foena*, 2f. sk cp; sk o ag, ab: fru o, ac, sca mr, 2-to, eq to ln-ol scale. 2 f.

- 25 *cristata*, J. 2f. sk ss, 6 to 14, glo, bt: fru ol-o, cp, di, wi, ac, bifid, eil-sr mr, lg ln-ol scale. 2 f.
- 26 *stelluata*, 2f. sk in fours, o sub rt, ss: fru o, sub-ac, cp, sub-bifid, sca at mr, div and rx, lg than o ot scale. 10 i.
- 27 *scirpoides*, 2f. sk in fours, ss, o, ot; bt: fru o, cor, cp, sca at mr, lg than o, a scale. 10 i.
- 28 *curta*, O. M. 2f. sk in fives, sub-apx: scales sub eq: fru rd a, sub-con-vex ot an; flat be, and rd ab; orifice 2-to. 20 i.
- 29 *festucea*, 2f. sk ss, al, o, apx 5—8 bt: cps rd-o, wi 2-to, eil-sr at mr, lr than ln-o, scale. 2 f.
- 30 *ten'era*, 2f. sk about in fives, ob, rt, al, ss, below; bt: fru o, cp, sb, n, eil-sr, lr than ln-ol scale. 2 f.
- 31 *siccata*, J. 2f. sk ep; tm sk ot; lower ones in fours, o, a: fru ln-o, ac, cp, sca at mr, bifid, n, eq ln-o scale. 15 i.
- 32 *novae angliae*, J. 2f. s sk sh, slender, up fru-bearing; p sk 2 or 3, r, ss, o, al, few-f, bt: fru sub 3-sided-ov, sub-pu, lg o scale. 7 i.
- 33 *aurea*, 2f. s sk sh pe, w bt; p sk in threes, ol, lax-f, sub-pd; sk expd, sub-apx, bt: fru ob, ot, n, sub-ventricose, en at orifice, lg o, a scale. 6 i.
- 34 *saxat'ilis*, M. 2f. sk ol, e; scales ot; p sk in threes, al, up o, ss, lower sub-ol, sh-pd, bt: fru o-ot or ol-ov, sub-cp, orifice en, sub-pu.
- 35 *acuta*, M. 2f. s sk nm or one, ol e, up pd, rest sss; p sk sm in threes, ol, ey, re, ss, lower pd, often s at apex, dense-f: fru ov, ep, a, g. 2 f.
- 36 *cespitosa*, M. 2f. s sk sm sl, e, ol; lower ss; p sk in threes, ol-cy, dense-f, ss, s at apex: fru ov and ob, eon both sides, ot, g, en lg ol ot scale.
- 37 *aquat'ilis*, M. 2f. s sk nm, or one, e; p sk sh-pd, ey, in threes, clavate ab, dense-f, sub-e, sm sat apex: fru ov sub-lens, g, en eq o a scale. 2 f.
- 38 *stricta*, M. 2f. s sk in pa, e, ol, 3-sided; p sk in threes, ey, e, s apex, a ab, sh-pd: fru o, ep, a, g, en orifice, lg than ol a scale. 15 i.
- 39 *crinita*, O. M. 2f. s sk two, often with fru; p sk with 3 stg, in threes, ol-cy, pe, no, ta below, s ab: fru o, sub 3-sided, sh, g, orifice en, sca scale.
- 40 *polytrichoides*, O. M. 2f. sk tm, ol: fru sm fives, ol, al, sm 3-sided, g, em, twice lg as o ot scale. 10 i.
- 41 *leuc-glochm*, J. 2f. sk 4-f; s f sl: fru ln, 3-sided-t, rx, twice as lg as ln-ol scale. 6 i.
- 42 *fraseri*, 2f. sk ey: fru glo-o trian, en at orifice, lg ol scale. 1 f.
- 43 *ovata*, sk in fours and fives, o, dense-f, pd, pnd, bt: fru o, ep, ac, bifid, eq to o, a scale.
- 44 *wildenowii*, J. 2f. st 1 to 3 from same ro: one sk s ab, ov at base: fru 3 to 6, glo-o, sub in, sub 3-sided: scales o, a, inferior, fi, lg. 10 i.
- 45 *pedunculata*, O. Ap. 2f. sk in fives, 3 lg-pd: fru ob, 3-sided, re at apex, g, lg than ol or ob scale. 6 i.
- 46 *squarrosa*, 2f. sk one, two, or 3 ol-cy: fru im, o with a lg beak, 2-to, spr, g, lg ln scale. Var. sk lg-cy, ta ab, in pa, apx.
- 47 *atrata*, 2f. sk sub in fours, ol o, sub-no, tm, s below; up crowed, ss; lower distant, pd rd-ov, cp, g, sh-beaked, with a 2-lipped aperture. 1 f.
- 48 *virescens*, 2f. sk in threes ol, e, al; up pd, be s; fru sub-ss, bt: fru o, ot, pu, eq the o, pu scale. 20 i.
- 49 *hirsuta*, 2f. sk in threes, ol, al, e; up one sh-pd a s below; rest sub-ss, 1-bt; all apx, dense-f: fru 3-sieed-o, n, ot, en at aperture, eq scale.
- 50 *luxbaumia*, J. 2f. sk distinct, in fours; up sk s, pd, elavate, fru ab; rest fru-bearing, ol, rt, ss, bt, sm with 2 stg: fru ol-o and ob, ot. 18 i.

- 51 *viridula*, 2f. sk in threes, ov, ss, apx; tm, s below; lower ax: fru o, 3-sided, g, ac, eq o ac scale. 1 f.
- 52 *formosa*, 2f. sk ol, thick 1-sided, in fours, ex pd, no; up s below: fru ol, 3-sided, a at both ends, a sub-en or 2-lo orifice, twice lg as o, scale.
- 53 *gracillima*, 2f. sk lg, lax-f, in fours, ex pd; up s; all bt: fru ol, 3-sided, ot, sub 2-lo orifice, lg ol, ot, sh-awn scale.
- 54 *torreyana*, M. 2f. fru sk in threes, ol, with sc f, rt, ex pd, sub-pnd: fru ol, ta at base, 3-sid, n, a, sh, with a 2-lobed orifice, eq to ol scale. 18 i.
- 55 *fuliginosa*, 2f. sk ol, in fours; tm one s below; lg ones ex pd, nq: fru ol, bifid at apex, lg than ol scale.
- 56 *pubescens*, M. 2f. s sk 3-sided, sub-ss; p sk in threes, ol, sub-lax-f, e, bt, lower pd: fru o 3-sided, beaked, sub-en orifice, pu lg o-ol scale. 18 i.
- 57 *vestita*, 2f. s sk sm sml cy-ol, up el, pd: p sk pa, o ol, ss, sub-ap, bt, sm s ab: fru o, ol, 3 sided, n, sh beaked, bifid, pu, lg o scale. 1 f.
- 58 *varia*, O. Ap. 2f. s sk e, sh or lg; p sk in threes, o, ss, sub-apx, few-f: fru ov, glo-3-sided, ac, bifid? pu, eq to o, ac scale. 10 i.
- 59 *marginata*, Ap. 2f. s sk e, pd, sm 3-sided; p sk in pa, o, suc-ss, sub-apx, few-f: fru glo-o, sh-beaked, 2-to, tom, eq o ac, ol scale. 15 i.
- 60 *flava*, 2f. s sk sm 3-sided, from base with p, sh-pd; p sk in threes, o-ol, apx, pd: fru o, 2-to, rx beak, lr than ln-o scale. 18 i.
- 61 *oederi*, 2f. s sk e; p sk in fours, ag, sub-ss, bt, sm ol; up sk s ab or below, or both: fru sub-o, n, 2-to, sb beak, lg o scale.
- 62 *tentaculata*, M. 2f. s sk sub-ss, bt; p sk in pa or in threes, ol, cy, bt; up ss, rest sh pd: fru o, inf, lg-beaked, 2-to, n, g, di, ep, 2 lg scale. 8 i.
- 63 *collinsii*, 2f. sk distinct; se; p sm threes, ss, few-f: fru sb sm inf-ln, 2-lg beak, g en orifice, 2-lg ln scale. 1 f.
- 64 *folliculata*, O. M. 2f. sk distinct: s ol, pd; p sk sm in pa: apx, few-f, e, pd; fru conic-o, ac, beak, 2-to, lg, g, n, inf, div, 3 lg o scale. 20 i.
- 65 *xanthophysa*, M. 2f. sk distinct; p thick, in threes, lax-f, o, pd, 1-bt; fru ol, inf, lr, beak, div, 2-fork orifice, lg ln-o, scale. 2 to 5 f.
- 66 *lupulina*, O. M. 2f. s sk e; p sk three four, o-ol, thick, or cy, e, apx; fru o, inf, lg, n, g, thrice lg ln-o, ac scale. 3 f.
- 67 *darisii*, M. 2f. s sk ss, sh; p sk pa or 3, apx s, o, ss, few-f; rad lg pd: fru 3-sided, ta at base, beak, pu, eq o scale: culm dc. 8 i.
- 68 *nigro-marginata*, 2f. sk; s sk ss; p sk pa, o, ss, apx s; rad lg sm in 3, fru o, sm 3-sided, 2-to, pu, eq o a scale. 6 i.
- 69 *collecta*, 2f. s sk e, lax-im, pd; p sk sm in 3, o, few-f, bt; lower sh-pd: fru o, sm 2-to pu, lg o, a scale. 15 i.
- 70 *plantaginica*, O. Ap. 2f. s sk e, pd; p sk sm ol, f sm sc, e, rt, ex pd; fru ol, ov-3-sided, sub-eu, ta at ends, curved at apex, lg o scale. 18 i.
- 71 *anceps*, O. M. 2f. s sk ol, sh-pd; p sk sm 3, sub-fi, e, al, sc f: pd 2-edged; up sk ss, sm rt pd: fru ov, el at base, ta at apex, al. 1 f.
- 72 *alba*, 2f. s sk pd; p in pa, 5-f: bt she, o, trun. 10 i.
- 73 *oligocarpa*, 2f. s sk bt; p sk in 3, sm 5-f, ol, pd lg lax: fru o-3, al, g, n, sh at apex, en, lg o scale. 1 f. Sk lg, pd sh, fru rt sml, scales $\frac{1}{2}$ lg.
- 74 *conoidea*, 2f. s sk ol, pd; p sk in pa 3, ol, rt, e, sub-dense-f, bt; up sub-ss: fru ol, g, n, sm en, lg o scale. 1 f.
- 75 *granularis*, 2f. s sk e, sub-pd; p sk sm in threes, cy, dense-f; up sub-ss, apx; lower pd: fru rd-o, re at apex sh-beak, en, n, twice lg o ao scale.
- 76 *scabrata*, 2f. s sk 3-sided, pd: p sk sm fives rt, ex pd, cy, al, sub-e, lg 1 bt: fru ol-o, beak, sub-bifid, sca, lg scale: scale ln-o, ac, sub-cil. 18 i.

- 77 *blanda*, 2f. s sk e, pd, 3-sided; p sk sm in threes, ol, ey, f se, al, bt; up sub-ss; lower lg pd: fru ov, sm 3-sided, re en at apex, m. 1 f.
- 78 *laxiflora*, 2f. s sk ol, e; up one sh pd; lower one ex pd: fru o or ol-o, sub-ot, g, n, sm 3-sided, en orifice, lg o-in sca scale. 15 i.
- 79 *ustulata*, 2f. s sk ol, ree; p sk pa, ov, no: fru o, beak, ac, flattish, both sides, 2-to at orifice, twice lg as o scale.
- 80 *flexuosa*, 2f. sk; s sk fi; p sk in fours, fi, fl, no: f se; pd lg: fru ln-ol, sm 3-sided, al g, beak, bifid, twice lg ln-o scale. 18 i.
- 81 *sylvatica*, 2f. s sk sh-pd; p sk sm in fours, fi, se f, rt, no, lg-pd: fru o, 3-sided, g, sm lg-beak, bifid, o, m, mem scale. 15 i.
- 82 *digitalis*, 2f. sk; p sk in threes, al, lax-f, with lg, fi, no pd: fru ov-3-sided, ot, n, g, lg o, a scale. 6 i.
- 83 *castanea*, sk s p; p sk sh, dense-f; pd lg-ex, re, bt, lax-she, l, scales sh: fru ol, 1-lo: 1 hir.
- 84 *washingtonia*, J. 2f. s sk e; p sk ol, ey, sub-ss, sub-rt, e; f sm se: fru ov, a both ends, ep, sh-beak, g, en, eq ol a scale. 1 f.
- 85 *halseyi*, M. 2f. s sk rt p, 1 or 2 sm l near base; p sk sl; ol, cy, e, lax-f: fru ov-o, sh-beak, sm 3-sid, n, g, lg o, a scale. 18 i.
- 86 *tetanicca*, 2f. s sk pd; p sk in pa or 3, rt; orifice lg o scale. 10 i.
- 87 *miliacca*, 2f. s sk el; p sk in 3, el, cy, up sub-ss, rest pd, bt, no: fru o-3 sided, g, sm beak, en at orifice, lg ol, em obeor, sca scale.
- 88 *umbellata*, O. M. 2f. sk; s sk sh, lg pd; p sk sm in 4, sub-ss s, sub-rad, ex pd, o sub-u: fru-o, a both ends, sh 2-to, pu, eq ln-o scale. 1-4 i.
- 89 *miliaris*, 2f. sk; s sk lg-pd: p sk ss, ov: bt se, sh: fru sub-sph so.
- 90 *pullescens*, 2f. sk pd, sub-ey, no: bt sm cls, l: fru ov, ot, t: euhm e: s sk ln, p in 3. 1 f.
- 91 *oakes'ii*, J. 2f. sk; st sk sh-bt, ol; p sk sm pa, o, bt; sub-pd: fru o, sm 3-sided, n, sh-beak, g, en at orifice, lg ln-o scale. 1 f.
- 92 *hystericina*, O. M. 2f. sk; s sk 3 sided, bt, pd; p sk sm in 3, al, sm ol, cy, bt, no; up lg-pd: fru o, g, sm 3-sided, beak, n, 2-cleft. 20 i.
- 93 *limosa*, 2f. s sk w bt: p sk sm in pa, o, ol, sm lg-pd; f sm se, fru ep, sh-beak, en at orifice, eq o ln-o ol scale. 1 f.
- 94 *pseudo-cyperus*, O. M. 2f. s & p sk; s sk pd; p sk pd, cy, pnd; bt sm cls, lg-l, sub-apx: se: fru ol, ac-beak, rx, 3-sided, n. 3 f.
- 95 *hitchcockii*, 2f. s sk e, pd; p sk sm in 3, e; f few, se: lower sk rt: fru sm 3-sided-ov, al, re at apex, striate, sh fru beak eq ol o-m scale. 20 i.
- 96 *terna*, 2f. s sk e; p sk pa, o-ol, apx, sub-pd: fru ov, sm 3-sided, a, pu, sh ol-o, sub-m scale. 6 i.
- 97 *trichocarpa*, 2f. s sk sm in 3, e; lower ss; p sk in 3, e, lg-cy, sub-rt, sub-lax-f, ex pd: fru ln-o, n, beak, 2-fork, pu, 2 lg as ln o scale. 2 f.
- 98 *barrattii*, 2f. s sk sm in pa; p sk sm in 3, ol-cy, no, up s: fru ol, sm 3-sided, sh-beak, sub-sca, en at mouth, sh ln-o, ot scale. 1 f.
- 99 *filiformis*, 2f. sk sub-ss, ol: bt sh-she, l, rt: cps lg-ov, v, 2-forked beak; l convolute: s sk ln; scale fru ol, yellow n p n scale. 2 f.
- 100 *ampullacea*, 2f. sk sh-pd, cy, thick, lax; s sk nm: bt cls, l; scales ln: fru-sub-glo, inf, se-beak, s sk 3 or more.
- 101 *xesicaria*, 2f. s sk sm in threes, e; up pd, rest ss: p sk in pa 3, cy, al, e, dense-f, up ss, lower sub-pd: fru ol-o, sub-t, inf, sb-beak, o scale. 3 f.
- 102 *bullata*, 2f. s & p sk distinct; s sk in 3, lg, up pd, 3 p sk in pa, ex pd, ol, cy, sm no: fru o, glo, inf, e, g, sub-lis 2-fork beak, 2 lg scale.
- 103 *schweintzia*, J. 2f. sk distinct; s sk pa, up lg, pd; p sk in fours, ol, cy, sub-apx, pd, sm pnd, lg l bt: fru o-ol, ta ab, beak, inf, 2-fork, n. 10 i.

- 104 *retrorsa*, 2f. s sk sm in 3, up lg pd, rest sh, sml, fru at base, ss; p sk sm in fives, ol, cy, apx, sub-fas, l bt pd, lower rt, lg pd: fru o.
- 105 *pellita*, 2f. s p sk distinct; s sk pa, ol, lower ss bt; p sk pa, orthrees, cy, e: fru o, sh-beak, sm 3-sided, h, eq ln-o, scale. 20 i.
- 106 *lacustris*, O. M. 2f. sk distinct; s sk sm e, lower ss; p sk in pa or threes, fru ol, cy, e, n, g, lg ln-ol scale. 3 f.
- 107 *oligosperma*, 2f. s sk my; p sk glo, ss: fru o, lr, few, a: i inv.
- 108 *longirostris*, 2f. s sk in 3, sh, up pd, middle ss, lower pd with o, cuspidate bt; p sk in pa or 3, cy, pnd, sc f sm distant, lg ex pd bt.
- 109 *dioica*, 2f. sk si, die, s ab, ol; p sk ol o, sub-dense-f: fru ov-o, n, e, sr mr ab, eq o scale. 9 i.
- 110 *remota*, 2f. sk s below, nm, ol-o, sub-ss; lower with lg, l, li bt be: fru o, ac and bifid, or sub-bifid, lg ln-o scale. 18 i.
- 111 *concolor*, 2f. s sk sl; p in pa 3, e, sub-ss: fru ov, m, en, so.
- 112 *mutica*, 2f. s sk sl, with ot scales; p sk in threes, e; pd sub-ex: fru ov, not awn so, lg o, m scale: l bt flat.
- 113 *affinis*, 2f. sk s ab, few-f, lax: scales ln, a, awn: l flat. 6 i.
- 114 *attenuata*, 2f. one sk, s ab, dense: p ones few-f, in threes: scales ot.
- 115 *filifolia*, 2f. sk s ab, sub-cy, a: fru sub-glo, en at orifice: l fi, inv, sb. 4 i.
- 116 *media*, 2f. sk s below, in threes, sub-ss, apx: fru o, beak, g, lg ot, o scale.
- 117 *misandria*, 2f. sk sm in threes, ov, pd, pnd, al sub-u; fru ln, ac, 2-to, dn at apex, lg ov, ot scale. 6 i.
- 118 *richardsonii*, 2f. s sk sl, pd, e; p sk in pa, sub-ss, apx, pd: fru o, ot, pu, o a scale: culm sca. 6 i.
- 119 *concinna*, 2f. s sk ss, cy, ol p sk in threes, sub-ss, apx: fru 3-sided-ob, sh beak, 2-to, his pu, twice lg as ob scale. 4 i.
- 120 *capillaris*, 2f. s sk sl, pd, sml: p sk sm in threes lg ex pd, no, ol, few sc f: fru ov, beak, ac ends, twice lg as o ol, ot scale. 6 i.
- 121 *podocarpa*, 2f. s sk sl; p sk pa, ol, pnd: fru ov, sh-beak, en, so; seed pd: lower l tru.
- 122 *aristata*, 2f. s sk pa my; p sk sm in threes, cy, sh-pd: fru g, n, lg-beak, bifid; scales awned: l v be on she.
- 123 *muskingumensis*, J. 2f. sk com; sk s below, ov-ol, a both ends, sm eights, apx: fru ln, cp, n, wi, g, ac, 2-to, 2 lg ln-o scale. 30 i. S.
- 124 *floridana*, 2f. s sk sl, ss, sml: p sk sm in 4, o, ss, bt, lower sub-rt: fru ov, sm ta at base, cp, beak sh bifid, eq o-ol, sca scale. 6 i.
- 125 *dasycarpa*, 2f. sk distinct; s sk sub-ss, sml; p sk sm in threes, sub-apx, ol, al, lower sub-pd: fru 3-sided o ol, v, n, lg o ac scale. 1 f.
- 126 *elliottii*, Ap. 2f. s sk sl, lg-bt; p sk in threes, rd, up ss, high one s at apex, lowest lg pd no: fru lg-beak, 2-fork, lg o, ot scale. 2 f.
- 127 *glaucescens*, Ap. 2f. s sk sl, cy, pd; p sk sm in threes, pd, cy, pnd: fru o, 3-sided, cp, gl, beak-bifid, eq o, em, m scale. 2 f.
- 128 *verrucosa*, 2f. s sk my or one; p sk sm in fives, e, cy, s ab, ax, lower ex pd: fru o, cp, sm 3-sided, sh-bifid, sh o, sub-em, m scale. 3 f.
- 129 *cherokeensis*, 2f. s sk sm in threes, snb-cy, up lr pd; p sk in 4, cy, sub-lax-f, lg ex pd, sab: fru o, g, sm 3-sid cp, n, lg-beak, lg scale. 1 f.
- 130 *gigantea*, Ap. 2f. s sk my or one: p sk in 3, cy, sub-lax-f, rt; up ss, lower ex pd: fru glo-o, lg beak, n, inf, g, bifid, spr, 2 lg scale. 2 f.
- CARICA. 20—10. 97. Of Caria.
- 1 *papaya*, O. g. Ju. h. l pal, 7-lo, lo sin; di ol a: s f cmb. 20 f. S.

- CARPI'NUS. 19—12. 99. Celtic, *car*, wood, and *pin*, head. Hornbeam.
 1 *americana*, G. g. M. \dot{h} . l ol-o, ac, uneq sr, scales fru 3-par. 20 f.
 CAR'THAMUS. 17—1. 54. Arabic name *quortom*, paint. Safflower.
 1 *tinctorius*, y. J. \odot . l o, en. sr-pk. 2 f. E.
 2 *coerulius*, b. \dot{h} . st l-f: l ln-o, sp-to.
 CA'RUM. 5—2. 60. From Carius. Caraway.
 1 *carui*, w. M. \dot{h} . st brh: l she: inv none. 2 f. E.
 CA'RYA. 19—12. 94. Gr. *karua*, the walnut. Hickory.
 1 *tomentosa*, Ap. \dot{h} . l 9, ln-ol, ac, sr, pu be, sca: tm sub-pe: am fi tom.
 2 *alba*, O. \dot{h} . l 7, lg-pe, ln-ol, ac, sr, v be: tm l ss: am fi, g: fru glo.
 3 *sulcata*, \dot{h} . sr, pu be: tm l sub-ss, ta: fru rd, 4-ke: nut sub-glo. 80 f.
 4 *amara*, Ap. \dot{h} . l ab 9, o-ol, ac, sr, g both sides: tm l sh-pe.
 5 *porcina*, \dot{h} . l 7, ln, ac, sr, g both sides: tm l sub-ss: fru glo, so.
 6 *aquatica*, Ap. \dot{h} . l 11, nr, ln, ac, sub-si, g, ss: fru pd, o; sut 40-50. S.
 7 *myristicaformis*, Ap. \dot{h} . l 15, o-ln, ac, sr, g; tm ss. fru ov, rg, sca.
 8 *oleaceaformis*, Ap. \dot{h} . l nm, 13—15. ln, sr; pe not pa: fru ol, 4-sided.
 CAS'SIA. 10—1. 93. Heb. *kasian*, to tear off. Senna.
 1 *marilandica*, y. Au. \dot{h} . sub-g: l in 8 pa, ln-ol: m; f in ax r, and tm pn.
 2 *chamaecrista*, y. Ju. \odot . g: l li, in my pa, gld on pe sub-pe: 2 pt spotted.
 3 *nictitans*, y. Ju. \odot . g: l li, in my pa, gld of pe: pd sh, ax, 2 or 3-f.
 4 *fasciculata*, y. Ju. \odot . g: l at summit 9 pa: gld ss near middle of pe.
 5 *senna*, y. Ju. \odot . l in 6 pa; pe gld-less: lc ren. E.
 6 *tora*, y. Ju. \odot . g: l in 3 pa, ob, cil; tm ones lr; a sb gld lower pa. S.
 7 *occidentalis*, \dot{h} . g: l in 5 pa, o-ln, ac, sca along edges: pd few-f.
 8 *ligustrina*, y. Ju. Au. \dot{h} . pu: l 7-pa, ln; sml: pd tm, pn: le fal.
 9 *linearis*, y. \dot{h} . g: l in 5 or 6 pa, o, a: pd ax, few-f: le t.
 10 *procumbens*, y. J. \odot . l in my pa, w gld: st prt. F sml.
 11 *aspera*, \odot . l in my pa, li, lu, cil: pd few-f; ab ax: s 9—7; 3 lg rest.
 CASTA'NEA. 19—12. 99. A city of Thessaly. Chesnut.
 1 *vesca*, O. g. J. \dot{h} . l ln ol, sin-sr, with sr g both sides. Lr tree.
 2 *pumila*, g. J. \dot{h} . l ol, a, sr, with white d be. Sml tree.
 3 *nana*, \dot{h} . l ov-ln, ot-sr, tom be. S.
 CASTILLE'JA. 13—2. 36. Castillejo, a Spanish botanist.
 1 *occidentalis*, \dot{h} . st si: l li-ln, nr towards apex, pu, en, a: f sk ss.
 CATAL'PA. 2—1. 40. Indian name.
 1 *cordifolia*, y. \dot{h} . l si, cor, en, by threes: f in pn 40—50 f.
 CAULI'NIA. 19—1. 7. F. Cavolini. Knot-grass.
 1 *flexilis*, Au. \odot . l i sixes, to at apex, spr.
 2 *fragilis*, \odot . l in threes or op, li-sb, re, to, rigid.
 CAULOPHYLL'UM. 6—1. 78. Gr. *kaulus*, a stem, and *phullon*, leaf.
 Cohosh.
 1 *thalictroides*, O. p-y. Ap. \dot{h} . g: l dec: l ov, lower pe lo, end 3-lo.
 CEANO'THUS. 5—1. 95. Gr. *keanōthos*, of Gr. *keo*, to prick, *anōthēn*, above. Jersey tea.
 1 *americana*, O. w. J. \dot{h} . l o, ac, sr, 3-n, pu be: yn ax, lg-pd, 'sub-cmb.
 2 *herbaeca*, \dot{h} . l ov, sub-sr: pn ax and tm.
 3 *ovalis*, w. \dot{h} . l ov, with gld sr, 3-n; n pu be: pn cmb.
 4 *sanguinea*, w. \dot{h} . l ob, sr, pu be: pn ax, cp, sh-pd; ag. 3 f.
 5 *microphylla*, w. Ju. \dot{h} . l sml, ob, en, g: r cmb, tm. S.
 6 *serpyllifolia*, brh fi: l sml, o, sr ot; pe and n strigose be: pn pe ax.
 CELAS'TRUS. 5—1. 95. Gr. *kélastros*, a tree of which pails were made.
 1 *scandens*, O. y. w. J. \dot{h} . st twining: l ol, ac, sr, r tm. Staff-tree.

2 *bullata*, w. Ju. ♀. w arm; l o, a, en: pn tm. 20 f. S.

CEL'TIS. 5—2. 99. The Lotus. Hoop ash.

1 *occidentalis*, w. ♀. l o, ac, eq sr, except near base; sca ab, h be.

2 *crassifolia*, w. M. ♀. l o, ac, uneq sr, uneq cor at base, sub-cr; pd 2-f.

3 *pumila*, g. M. ♀. l o, ac, eq sr, uneq at base, so on both sides; fru sl.

4 *reticulata*, ♀. l br-cor, pu, sub-cr, en, ot, uneq at base, sca ab, ve be.

CEN'CHRUS. 3—1. 10. Gr. *hegchros*, millet. Buri-grass.

1 *echinatus*, Au. ☼. sk with f apx: inv sub-glo, v: culm cp e or pc.

CENOMYCE. Gr. *kenos*, empty, *mukes*, a small fungus.

1 *pyxidata*, fr fol: seg cre, as stipe tu el, cup-shaped, g, warty gray-green, cups regular, mr prolif.

2 *imbriata*, fr fol, seg sml, cre: stipe el cy, cup-bearing sm sb: white cups regular: mr cut-cre prolif.

3 *coccifera*, fr fol, sml seg, rd cre, na be: stipe el tu, na, pale-yellow or grayish green: all cup-bearing; cups with mr spr, fer lr scarlet.

4 *rangiferina*, fr el cy: e rg, brh, ax brh sc, di spr, rec glo clustered, brown.

CENTAUREA. 17—3. 54. Chiron, the centaur. Blue bottle.

1 *cyanus*, b. w. r. J. ☼. scales of c sr: l li, en; lower to. 2—3 f. E.

2 *jacca*, p. Ju. 2f. l ln, en; rad dt brh an: c scarious.

3 *benedicta*, y. J. ☼. scales of inv arm sp, bt: l de, to, sp.

4 *solstitialis*, y. Ju. ☼. c pal-sp, sl: sp straight: l ln-li, de, en; rad ly.

5 *nigra*, p. Au. 2f. scales of c o, with an e cap fringe: l ly-an; up o.

6 *calcitrapa*, ☼. scales of c sp, ss; l pnt, li, dn: st pi.

7 *centaurium*, 2f. l pnt, g; l sr, de: c so.

8 *scabiosa*, 2f. l pnt; di ln, spr, a, pnt at base: c cil.

9 *suaveolens*, ☼. l ly-pnt: c so.

10 *moschata*, ☼. l pnt; di en: c so.

11 *americana*, ☼. or ♂. st sub-brl: l ss; lower ol-o, re-to; up ln, a. S.

CENTAUREL'LA. 4—1. 34. Diminutive of Centaurea.

1 *verna*, w. March. ☼. st si, few-f, co lg as c: style lg as germ. S.

2 *aestivalis*, Ju. ☼. st si: pd op, si; di of co spt, a, thrice lg as c.

CENTUN'CLUS. 4—1. 34. Lat. *centunculus*, threadbare.

1 *lanceolatus*, O. r. March. ☼. l ln, ov ob, a: f ax, ss: st prt. S.

2 *minimus*, Ju. st si or with a si brh, sub-an: l al, spt-o, a: f sub-ss.

CEPHALANTHUS. 4—1. 46. Gr. *kephalē*, head, and *anthos*, flower. Button bush.

1 *occidentalis*, O. w. Ju. ♀. l op in threes, ov, ac. Infl a rd lid. 4—8 f.

CERAN'THERA. 13—1. 42. Gr. *keras*, horn, and *anthos*, flower.

1 *linarifolia*, r-w. S. ☼. st g, brl: l op, li, sm clust: r tm: pd op. S.

CERAS'TIUM. 10—5. 82. Gr. *keras*, horn, form of capsule. Mouse ear.

1 *vulgatum*, O. w. Ap. ☼. hir, ces: l o: pt ol, eq to c: f lg pd. 6—10 i.

2 *viscosum*, w. J. ☼. h and viscid, spr: l ln-ol: f sh pe: pt ob, lg c.

3 *scmidcandrum*, w. M. ☼. hir, viscid: l o-ol, a: pt em, sh c: pd lg c.

4 *hirsutum*, w. M. ☼. h: l ov, ot, en: f clust: pt 2-cleft, lg a c.

5 *dichotomum*, w. J. ☼. l ln: st dic: cps e, twice lg c.

6 *alpinum*, w. J. 2f. l ln-ov: pn dic, few-f, bt: cps ol rc.

7 *nutans*, w. J. ☼. viscid, pu: st e: l el, distant, ol-li, a; rad spt: pt ol, 2-cleft at apex, lg than c: pd at lg lg than f.

8 *oblongifolium*, w. J. 2f. ces, pu: st e, t l ln-ol, sub-a, sh than joints.

9 *tenuifolium*, O. w. 2f. pu, ces: l nr-li, lg: pt ob, em, thrice lg a c.

- 10 *arvense*, O. w. J. 2f. pu, ces: ln-li, ot, cil at base, sh than pt; obcor.
 11 *pennsylvanicum*, 2f. pu: st prt, l ln-li, co twice lg as c: pn lg pd dic.
 12 *bracteatum*, pu: st, cy: l ol, sub-m: f e, dic, with o a bt: pt eq c.
 13 *pubescens*, hir-pu, st h: l ln-li, with lg spaces between: pn tm sub 4-f.
 14 *clongu'tum*, 2f. hir: l li, lg than internodes: pd tm, lg, tric: bt op o:
 pt em, twice lg as a c: cps sub-glo.

CER'ATIO'LA. 20—2. 96. Gr. *keration*, little horn.

1 *ericoides*, Au. h. brh tom: l verticillate, nr, li so. S.

CERATOCHLO'A. 3—2. 10. Gr. *keras*, horn, and *chlōē*, grass.

1 *unioloides*, Ju. ☼. or 2f. spr; sk ol-ln, 6-8-f warm; she b at throat. ~

CERATOPHYLL'UM. 19—12. 88. Gr. *keras*, horn, and *phyllon*, leaf.
 Hornwort.

1 *demcr'sum*, Ju. 2f. l 8 in wr, dic 2 pa, to-spi on back: fax: fru 3-sp.

2 *submersum*, 2f. l dic in three pa: fru w sp.

CER'CIS. 10—1. 93. Gr. *kerkis*, shuttlec. Judas tree.

1 *canadensis*, r. M. h. l rd-hr-form ac, v at ax of n: sti minute. 15—30 f.

CERE'SIA. 3—2. 10 Goddess Ceres.

1 *fluitans*, Oc. ☼? st crp as, floating. l sca: sk nm; glu of c white. 1-3 f. S.

CETRARIA. 21—5. 2. Lat. *cetra*, a square buckler.

1 *islandica*, fr olive-brown, pale be: seg e, sub-li, multifid, fur so dt: cil
 brh, spr, rec ap, nr elevated, en. 2 i. Iceland moss.

CHAMAE'ROPS. 6—3. 11. Gr. *chamai*, on the ground, and *rops*.

1 *serrula'ta*, Ju. h. caudex cr; sti sr: fr plait pal. S.

2 *hystrix*, Ju. h. caudex crp; sti lg thorn: fr plaited pal. 4—5 f.

3 *palmetto*, Ju. h. caudex arbor; sti unarm: spa 2: fr plaited, pal.

CHAPTAL'IA. 17—4. 54. M. Chaptal.

1 *integrifolia*, p-w. J. 2f. l ol-ln, ob, tom be: scp na, 1-f; f no. S.

CHA'RA. 19—1. 6. Gr. *chairō*, to rejoice, because it is the delight of
 the water, or that it delights in water. Feather beds.

1 *vulga'ris*, O. Ju. ☼. st brh na base; brh t; jt l: l ol-sb: bt sh ber.

2 *foliosa*, Ju. ☼. st na, ab: brh t, l at base and joints: l li: bt sh ber.

3 *flex'ilis*, Au. ☼. st na: brh l-less, cp.

4 *glabra*, Ju. plant g.

5 *capitata*, st and brh t, g; joints l: fru in hd: bt lg ber. S.

CHEILAN'THES. 21—1. 5. Gr. *cheilos*, lip, and *anthos*, flower.

1 *vesti'ta*, 2f. fr 2-pnt, h both sides: l pnt: di ol, ot, en: stir rough-h.

2 *dealbata*, Ju. 2f. fr pnt: l ov, cre or em at apex. white be. S.

CHEIRAN'THUS. 14—2. 63. Gr. *cheir*, the hand, and *anthos*, flower.

1 *pal'lasii*, r. Ju. ♂. st si, t, sub-g: l g, ln-li, ta, re-to.

2 *capitatus*, rg: l ln-li, lg-ta at base, l and st stig: f dense-cmb.

3 *chciri*, J. 2f. l ln, a, g: brh an: st sub-woody texture. E.

4 *fenestra'lis*, ♂. l crd in hd re: st undi.

5 *an'nuus*, Ju. ☼. l ln, sub-dt ot, hoary: silique cy, a apex.

6 *in'canus*, ♂. l ln, en, ot, hoary: silique tru, cp at apex.

CHELIDO'NIUM. 12—1. 62. Gr. *chelidon*, a swallow.

1 *majus*, y. M. 2f. u ax, pd: l al, pnt, lo. E.

CHELO'NE. 13—2. 37. Gr. *chelone*, a tortoise. Snake-head.

1 *glabra*, w. r. Ju. 2f. l op. ln-ol, ac, sr: sk tm, dense-f.

2 *ly'oni*, p. Au. 2f. g, brh: l pe, cor-o, sr: sk tm: f clustered. S.

3 *latifolia*, r. Au. g: l br, o ov, sr: ac, ta at base, pe: f crd, bt c cil. 2 f.

CHENOPO'DIUM. 5—2. 29. Gr. *chēn* (*chēnos*) a goose, and *pous* (*pōdos*)
 a foot. Pig weed.

- 1 *rhombifo'lium*, J. ☼. l trian-rh, a, re to: r ax, e, l-less: bt minute.
 2 *album*, O. g. Ju. ☼. l rh-o, en behind, up ol, en, seed so. 2—4 f.
 3 *hybridum*, Ju. ☼. l cor, an-to, ac: r brh, l-less. Var. st si, 5-an: l o, sub-cor, re-to: sk si, tm, na. 2—3 f.
 4 *rubrum*, r-g. Ju. ☼. l rh-trian, to sin: r e, com, l. 2—3 f.
 5 *ambrosiöides*, O. g. Ju. ☼. l ln, rt to: r l si. 1—2 f.
 6 *botrys*, g. J. ☼. l ol, sin: r na, my-cleft. 12 i.
 7 *anthelminticum*, g. Au. 2f. l ol-ln, to: sk lg, int, l-less. 12—24 i.
 8 *glaucum*, 2f. l ol, re, gl be: sk si, na, gl n, ax tm.
 9 *mariti'nium*, g. Au. 2f. l sb, t: f glm, ax. 18—24 i.
 10 *murale*, Ju. ☼. l o, uneq to, a: r brh, l-less.
 11 *bonus-henricus*, g. J. 2f. l trian, en: sk com, l-ss, ax and tm, e.
 12 *scoparium*, l flat, ln-li, mr cil: f glm, ax. E.
 13 *sub'spica'tum*, st 4-an, lower l hastate-o, a; up sub-ln: r glm, si tm. S.
 CHI'MAPHI'LA. 10—1. 51. Gr. *cheima*, winter, and *philos*, lover.
 Prince's pine.
 1 *maculata*, O. w. Ju. 2f. l ln, rd at base, rt sr, marked lg spots fi v.
 2 *unbellata*, O. r-w. Ju. 2f. l sr, green, wd-ln, a base; scp cmb: fi g.
 CHIOCOC'CA. 5—1. 57. Gr. *chion*, snow, and *kokkos*, berry.
 1 *racemosa*, y-w. Ju. ½. l o-ol, a, flat: r ax, pd, si. S.
 CHIONAN'THUS. 2—1. 37. Gr. *chion*, snow, and *anthos*, flower.
 Fringe tree.
 1 *virginica*, w. ½. pn tm, trifid: pd 3-f: l a. Var. l ov-ln, cr, g.
 CHLO'RIS. 3—2. 10. Gr. *chloros*, green.
 1 *petraea*, Ju. 2f. sk by fours, dg, e: f im, g: va of c awned: st ep. S.
 2 *sec'undus*, 2f. g, l li; sk el, 1-sided: sk sl rx: c glu li-ln, a.
 CHRYSAN'THEMUM. 17—2. 55. Gr. *chrusos*, golden, and *anthos*, flower.
 Ox-eyed daisy.
 1 *leucan'themum*, w. J. 2f. l cls, ln, sr, cut-to at base: st e. 12—20 i.
 2 *arcticum*, p-w. 2f. rad l 3-par, gh-to; cau wd, 3-par, ot. 12 i.
 3 *parthenium*, y. w. l pe, com, flat: l o, gh: pd brh, cmb, st e. E.
 4 *curinatum*, r. w. Au. ☼. l bi-pnt, g, c scale car.
 5 *coronarum*, p. w. r. Au. ☼. l bipnt, a, br outwards: st brh.
 CHRYSOBA'LANUS. 11—1. 92. Gr. *chrusos*, golden, and *balanos*, a plum.
 1 *oblongifolius*, w. J. ½. l ol-ln, cu at base en, g: f pn. 1—2 f. S.
 CHRY'SOCO'MA. 17—1. 55. Gr. *chrusos*, golden, and *komē*, hair.
 Goldy locks.
 1 *virgata*, her so: l nr, li: st brh; brh cmb, fs, virgate: scales c ap. 18 i.
 2 *nudata*, 2f. rad l spt, ln; cau li, sc: cmb com, fs: c ol, 2—3 f. S.
 3 *grave'olens*, y. Oc. ½. l li, 3-n, so: brh whitish, tom: f cmb, fs, crd: c an, so, 5-f. 6—8 f.
 4 *nauseosa*, y. Oc. 2f. c pd; c and l pu: l nr-li: cmb lax: clax, 5-f; g.
 CHRY'SOCO'NUM. 17—4. 55. Gr. *chrusos*, golden, and *gonē*, corner.
 1 *virginianum*, y. J. 2f. low: v: l ov, dn, nr into pe. 6—12 i. S.
 CHRYSOP'SIS. 17—2. 55. Gr. *chrusos*, golden, and *ops*, appearance.
 1 *mariana*, y. Au. 2f. v: l ss, ln-ol, ta to base, ot, gl-to, lower pe, sr: pd ax, cmb, gld-h. 12—18 i.
 2 *fulcata*, 2f. l ss, li, a: spr, n h both sides: pd few, ax cmb. 5—6 i.
 3 *graminifolia*, 2f. l ln-li, a, en, n: cmb com: st l towards summit. 2 f.
 4 *scabra*, y. Oc. 2f. or ♂. his-p, sca: rad l ov, to, pe; cau cor, o. 2—3 f.
 5 *argentea*, y. 2f. l ln, 3-n, e, en, a, zigzag: cmb sub-com, e: scales pn.
 6 *ericoides*, y. st brh; brh el sub-si, 1-f: l sb, im. lis, cil. 5—6 i.

- 7 *pinifolia*, y. Oc. 2f. g: strigid: 1 li, crd, rigid: cmb lr. 18—24 i. S.
 8 *trichophylla*, y. Au. 2f. h: 1 ol, ot, en, cls, sca on mr; cmb si. 12—18 i.
 9 *gossyp'ina*, y. 2f. woolly: 1 ss, ol, spt, ot, en: cmb fs. 1—2 f.
 10 *denta'ta*, y. S. 2f. 1 cu, ob, ot, to; up ol, ov, en: cmb si. 2 f.
 11 *diraricata*, y. S. 2f. 1 li-lu, a, sr: st his: pn div: pd c viscid-pu. 2 f i.
 12 *villosa*, y. 2f. hir v: 1 ss, en, li-ol, a, cil below; mr sca: brh sub-cmb.
 CHRY'SOSPLE'NIUM. 8—2. 84. Gr. *chrusos*, golden; and *splēn*, the spleen. Water carpet.

1 *oppositifolium*, O. y-r. M. 2f. 1 op, rd, cre, ta to pe.

2 *alternifolium*, 2f. 1 al.

Ci'CER. 16—10. 93. Lat. *cicer*, a bean. Chick pea.

1 *aric'tinum*, ☼. pd 1-f: seeds glo gibbous: 1 sr.

CICHO'RUM. 17—1. 53. *kichōrē*, probably Egyptian. Endive.

1 *in'tybus*, O. b. Ju. 2f. f ax, in pa, ss: 1 run.

2 *endivia*, b. ♂. pd ax, in pa; 1 lg, 1-f, the other sh, 4-f: 1 ol dt. E.

CICU'TA. 5—2. 60. Lat. *ciccuta*, internodes.

1 *maculata*, O. w. Ju. 2f. ser of 1 in: pe mem 2-lo at apex. 3—6 f.

2 *bulbifera*, w. Ju. 2f. 1 ter and biter, bu; 1 li and li-lu, rt to. 2—3 f.

3 *virosa*, 2f. u op to l: pe mr, ot: 1 ter, a ser. E.

CIMICIFU'GA. 12—4. 61. Lat. *cimex*, a bug, *fugo*, to drive.

1 *pulmata*, A. Ju. 2f. gm nm 12—15: pn dic, sub-cmb: cap sh, glo hd.

2 *podocarpa*; 2f. gm 4—5 pe, g: r pn: 1 dc; 1 c a. 2 f. E.

3 *cordifolia*, Ju. 2f. gm g, ss: r pn: 1 biter: 1 5—7 lo, sr, cor at base.

CINERA'RIA. 17—2. 55. Lat. *cincres*, ashes. Ashwort.

1 *heterophylla*, y. 2f. d; rad 1 lg-pe, ob-spt; o, a pnt; cau 2—3, li, pnt.

2 *canadensis*, 2f. v: 1 pnt, sub-v: di sin: f pn.

3 *intergrifolia*, O. y. Au. 2f. tom: st si: lower 1 spt, sub-dt; up nr-lu, en, e: f sub-u. S.

CIN'NA. 3—2. 10. Gr. *kinna*, from *kein*, to burn. Indian reed.

1 *arundinacca*, Au. 2f. g: pn lr, my-f, cap: 1 br-li: va awned apex. 2—5 f.

CIRCAE'A. 2—1. 88. Enchantress Circe.

1 *lutetia'na*, Ju. w. 2f. st e: 1 o, rt to, opaque, so. 1—3 f.

2 *alpina*, O. r-w. Au. 2f. st brh, g, pit: 1 br-cor, a to. 6—8 i.

CIS'TUS. 12—1. 80. Gr. *kistos*, from *kiste*, a box. Rock rose.

1 *canadensis*, O. y. J. 2f. sti, e; 1 al, e, li-lu, flat, tom be: r tm, few-f: di of c br-o-ac: cps sh than c.

2 *ramuliflorum*, O. y. Ju. 2f. sti, e, tom: 1 al, ol, a, at mr, tom be: r sh 3-f at summit; di of c or, cps glo, of lg of c. 6—10 i.

3 *rosmarinifolium*, y. Ju. 2f. stisi, e: 1 li, re at mr, tom be: r ax.

4 *corymbosum*, J. 2f. sti, e, ram, pu: 1 al, lu, be: cnb fst, nm f. 12 i.

5 *carolinianum*, J. 2f. w sti, hir, e, 1 al, ol-ov, sub-dt ob, hir both sides: pd few, tm, with c v: di of c ol, a, sh than pe. S.

CIT'RUS. 12—1. 70. Gr. *kitria*, the lemon. Lemon.

1 *medica*, w. J. ♂. 1 o, ac, with li wi pe. Var. sml fru, rd. 4—10 f. E.

2 *aurantium*, w. ♂. 1 ov, ac, with pd wi or mr.

CLARK'IA. 8—1. 88. Gen. Clark.

1 *puchella*, r. p. J. ♂. st e, 1, sub brh ab: 1 al, li, en, g: f ax lr. 12—18 i. S.

CLAVARIA. 21—6. 1. Lat. *clava*, club.

1 *coralloides*, white e, brh: el a, uneq. 3 i.

2 *fusiformis*, ces clavate: pileus attenuated cohering at base. 3 i.

CLAYTO'NIA. 5—1. 86. John Clayton. Spring beauty.

1 *virginica*, w. r. A. 2f. 1 li-lu: pt ob: 1 of c a: ro tu. 6—12 i.

- 2 *lanceolata*, w. J. 2f. 1 ln; cau o, ss: r sl, el: 1 of c sh, ot: pt wd. S.
 3 *alsinoides*, w. J. ☼. rad 1 spt-o; cau o, distinct: r in pa: f secund.
 4 *perfoliata*, w. M. ☼. rad 1 spt-rh; cau rd: r sub-sl, w bt: ro fi: pt em.
 CLE'MATIS. 12—13. 61. Gr. *klema*, a twig. Virgin bower.
 1 *virginica*, O. w. Ju. ♀. 1 ter; 1 o, sub-cor, gh-to lo: f pn, die. 15—20 f.
 2 *viorna*, b. J. ♀. 1 com & dec; 1 ln-ov, a at ends f sl, bl: pt thick ac.
 3 *ochroleuca*, w. & y. J. 2f. e, si, pu: 1 si, o, en; young silky. 12 f.
 4 *douglussii*, st e, si, 1-f. f no: 1 pi, 2-tripnt; di li ot.
 5 *flammula*, ♀. 1 lacinate; up si, en, ln. E.
 6 *riticella*, p. Ju. 2f. cli: 1 com and dec; 1 ov, sub-lo, en: pt ob, spr.
 7 *cordata*, w. Ju. ♀. cli: 1 pnt in pa; 1 cor, lo, ac, gh-to; te m: r com, el, my-f: s pt eq: f die. S-
 8 *holosericea*, w. ♀. cli: 1 di, ter; seg ol-ln: cmb few-f, die: pt li.
 9 *walteri*, w. ♀. cli: 1 di, pnt; 1 in 3 pa, pe, li-ln, a, en, gl be: f sl.
 10 *crispa*, p. Ju. ♀. cli: 1 pnt and ter; 1 o-ln, a, 3-lo or en: f sl, bl: pt ac, re; mnr: awns of seed sb, na.
 11 *eylindrica*, p-b. Ju. ♀. cli: 1 pnt, dec; 1 o, a at each end, g, si, pe.
 12 *reticulata*, p-r. Ju. ♀. cli: 1 pnt in 4 pa; 1 o, ot at end, all en, pe.
 13 *caresbyana*, ♀. cli, pu: 1 biter; 1 sub-cor, 3-lo: pn die; pt lg than s.
 14 *ovata*, 2f. e, si: 1 o, a, sh-pe, g, n both sides; lower sub-cor.
 15 *lineariloba*, pd 1-f: pt a: 1 di, pnt, g; 1 en or 3 par.
 CLEO'ME. 6—1. 64. Gr. *kleiō*, to shut up.
 1 *pentaphylla*, w. Ju. ☼. so: 1 q and ter; 1 en, sub-sr: s inserted pe gm. 2 f.
 2 *dodecandra*, r-w. Ju. ☼. viscid-pu: 1 ter; 1 ol: f 12-s. 1 f.
 3 *lutea* sub-g: 1 with 5 l; 1 ln a: silique ln ac with style, g, lg of stipe.
 4 *serulata*, p-w. Au. ☼. g: 1 ter; 1 ln, os sr: r el, bt li: s 6. 3—4 f.
 S.
 5 *pinnata*, y. sub-pu: 1 pnt; 1 ln, up confluent: f r. pe, ag. 2 f.
 6 *cuneifolia*, w. Ju. ☼. 1 si, sub-ss, ob-cu: f in tm clusters. 12—18. i.
 7 *mexicana*, y. st brh, so, unarm; brh ot an: 1 t, so, pe: 1 ln, a, en.
 CRET'HTRA. 10—1. 51. Gr. *klēthra*, alder. Spike alder.
 1 *alnifolia*, w. Au. ♀. 1 wd-ob, a, sr, g, both sides 1-cl: r sk, si, bt. 4—8 f.
 2 *tomentosa*, w. Au. ♀. 1 cu-ob, a, sub-sr, tom be: r sk, si. 2—4 f. S.
 3 *scabra*, w. Ju. ♀. 1 br-wd-ob, a, sr, sca on both sides; r sk.
 4 *paniculata*, w. Ju. ♀. 1 nr-wd-ln, g both sides, a, ser; ser ac: pn tm.
 5 *acuminata*, w. Au. ♀. 1 ov, ac, sr, g both sides, gl be: r sk, bt.
 CLINOPO'DIUM. 13—1. 42. Gr. *klinē*, bed, and *podos*, foot. Field thyme.
 1 *vulgare*, O. r-w. Ju. 2f. f hd wr: bt se, his: 1 pilose ab, rt to. 2 f.
 CNI'CUS. 17—1. 54. Gr. *knizō*, to sting. Thistle.
 1 *lanceolatus*, O. p. J. ♂. 1 dc, bis, pnt: di 2-lo, sp: scales ln. 2—4. f.
 2 *altissimus*, O. w-p. Au. 2f. 1 ss, ln-ol, sca, d be, to, cil; rad pnt; c bt, o: scales ln-o, sp, c-p. 3—8 f.
 3 *arvensis*, O. p. J. 2f. 1 ss, pnt, cil, sp: st pn: c o: scales br-ln. 2—3 f.
 4 *horridulus*, w-y. Ju. ♂. tall: 1 ss pnt, a-gh, sp: inv tm, 1-f, my-l; 1 sp, double: c unarm. 2—3 f.
 5 *muticus*, p. Ju. ♂. 1 all pnt, woolly be: di sub-ln, a, sp. 3—4 f.
 6 *discolor*, O. p. Ju. ♂. 1 ss, pnt, h d be; di 2-lo, sp: c glo, pu. 3—5 f.
 7 *virginianus*, p. Ju. 2f. st si: 1 ss, ln, tom be, rt to; te sp: f sl. 3—5. f.
 8 *odoratus*, r. Ju. ♂. woolly: st 1 to 3-f: 1 cls, ln-ol, pnt; seg lo cil, tipped with sp; cl both sides: c lr, sub-glo, na; scales sp. 1—2 f.
 9 *glutinosus*, p. Au. ♂. 1 pnt, seg div: c o; scales unarm. 4—6 f.

- 10 *undutatus*, r-p. l cls, pnt-sin; seg bifid, sp; both sides tom. 1—2 f.
 11 *pitcheri*, pu: l lg-li, pnt sub-de; rad she base st; l rt, li, tm with sp
 tm l br, sm brh: c glo; scales ln, ke, sp; sp rx.
 12 *glaber*, p. Ju. 2f. lss, pnt, all over so; seg sp, a, lower sub-de. 4-6 f.
 13 *repandus*, p. Ju. 2f. l nr, ol, ot sub-sin, with nm sinl sp: f sl. 2 f. S.
 CNI'DUM. 5—2. 60. Gr. *knidion*, orache.
 1 *canadense*, w. Ju. 2f. stan: l bipin; l my-par; seg ln.
 2 *atropurpureum*, p. J. 2f. rad l sub-cor, si, sr; cau ter; l o, a. 2—3 f.
 COCHLEA'RIA. 14—1. 63. Gr. *kochlias*, snail. Horse radish.
 1 *fenestrata*, st si: l o; pe br.
 2 *aquatica*, w. J. 2f. l all pnt: lower doubly pnt.
 3 *officinalis*, w. J. 2f. rad l rd; cau ol, sub:sin: silicles glo. E.
 4 *armoracia*, w. J. 2f. rad l ln, cre; cau gh.
 Co'IX. 19—2. 10. Gr. *koix*, palm leaved tree. Job's tears.
 1 *lachryma*, Ju. ☼. culm t ab: f na: fru o. 12—18 i. E.
 COLLINS'IA. 13—2. 37. Z. Collins.
 1 *verna*, O. b. M. ☼. l op and wr, ot, en: pd ax, wr, si:f. 12 i.
 COLLINSO'NIA. 2—1. 42. John Collinson. Horse baln.
 1 *canadensis*, O. y. Au. 2f. l hr-o, br, g: te of c sh-sb: pn tm, com. 1-3 f.
 2 *scabra*, r-y. Au. 2f. sm l, o, sub-cor, sub-h: te of c sh, sb. 2—3 f. S.
 3 *ovalis*, y. Au. 2f. l ol-ov, a, g; pe lg: te of c sh: pn tm, si na: st g.
 4 *tuberosa*, y. 2f. l sub.rh-ov, a each end, g: te of c se, lg than tube: pn
 com, l: st brli, sub li. 3—4 f.
 5 *anisata*, y. Au. 2f. l o, cor; n pu be: te of c li, lg tube: pn l com pu.
 6 *punctata*, y, 2f. l o-ln, ac, a at base, pu dotted be: pn com. 2—6 f.
 7 *verticillata*, l ov ac.
 COLLO'MIA. 5—1. 45. Gr. *kolla*, gluten.
 1 *linearis*, w-p. J. ☼. sub-pu; lol-li, sub-ln; fo-ln, a. 4—12 i. S.
 COLUTE'A. 16—10. 93. Gr. *koloutca*, to cut off.
 1 *arborescens*, y. h. l pnt; l ov, re; banner abbreviate. E.
 2 *vesicaria*, y. Ju. l pnt; l o: st ac, v: lg or, inf.
 Co'MARUM. 11—13. 92. Gr. *komaros*, strawberry tree. Marsh 5-finger.
 1 *palustre*, O. p. Ju. 2f. l in threes, fives, 7, sr: sti growing to pe she:
 fax and tm: st ro. 18 i.
 COMMEL'NA. 3—1. 13. Commelin two Dutch botanists.
 1 *angustifolia*, b. Ju. 2f. l ln-li, a, flat, g: she sub-cil: bt pd, sl. 12 i.
 2 *virginica*, b. Ju. 2f. e, pu: l lg-ln; she b: bt or inv sub-ss, lt tm. 2 f.
 3 *communis*, b. Au. ☼. co uneq: l o-ln, a: st crp, g. S.
 COMPTO'NIA. 19—3. 99. Bishop Compton. Sweet fern.
 1 *asplenifolia*, O. g. Ap. h. l lg li, al cre-pnt. 18—48 i.
 COXFERVA. 21—4. 2. Lat. *conferreo*, to knit together.
 1 *rivularis*, fi si, cap lg eq: jt grain bearing, 2 or 4 times lg as br:
 shining when dry.
 CO'NIUM. 5—2. 60. Gr. *koncion*, giddiness. Poison hemlock.
 1 *maculatum*, O. w. Ju. 2f. st brli, spotted: l com: seed striate. 2—4 f. -
 Co'NOSTY'LI. 6—1. 18. Gr. *kōnos*, cone, and *stulos*, a style.
 1 *americana*, y. Ju. 2f. co within: sep cmb-pn: l gl: fieq. 12—18 i.
 CONVALLA'RIA. 6—1. 18. Lat. *convallis*, a valley. Solomon seal.
 1 *bifolia*, O. w. J. 2f. st with two hr-ol, su-ss, l g: r si, tm. 4—6 i.
 2 *stellata*, O. w. M. 2f. st with al, cls, ov-ln l: r si tm. 8—18 i.
 3 *trifolia*, w. J. 2f. st 3-l: l al, o-ln: r si, tm, few-f. 6—10 i.
 4 *ciliata*, w. 2f. st arched: l al, ss, o, cil: pn tm.

- 5 *racemosa*, O. y-w. M. 2f. st with al l: l ss, ol-ov, ac, n, pu: f in a tm r-pn. 18—24 i.
- 6 *borea'lis*, g. y. J. 2f. sub-cau: l ov-ob; mr cil: u few-f: sub-cmb. 6 i.
- 7 *umbellata*, w. Ju. 2f. l rad, ol-ov, with mr ke cil: sep pu. 8—12 i.
- 8 *multiflora*, w. Ju. 2f. st t: l al, cls, ol-o: pd ax, my-f. 2—3 f.
- 9 *biflora*, g-y. J. 2f. st t, so: l al, ss, ln, 3-n: pd ax, sl, few-f. 12—18 i.
- 10 *pubescens*, O. w. 2f. st t, fur: l al, cls, o, pu be: pd ax, 2-f. 18 i.
- 11 *canaliculata*, w. Ju. 2f. st fur: l al, cls, ol, mr pu: pd ax, 2-f.
- 12 *latifolia*, 2f. st an: l ss, o, ac: pd l my-f. 4 f.
- 13 *hirta*, 2f. st an, his: l al sub-cls, o, ac: pd ax, 3-f.
- 14 *maja'lis*, w. J. 2f. sep na, so: l ov-o. S.
- CONVOLVULUS. 5—1. 44. Lat. *convolos*, to twist. Bind weed.
- 1 *repens*, O. w. & r. J. 2f. l a, lo en: bt a lg tban c, sh than co: pd an.
- 2 *arvensis*, w. J. 2f. st cli oi prt: l sag: lo a, spr: pd 1-f: bt a.
- 3 *panduratus*, w. r. Ju. 2f. pu: l br-cor, en lo, gui: pd lg: f fas: c g.
- 4 *spithameus*, w. J. 2f. e: l ov, or ol, sub-cor, pu: pd 1-f, lg l. 9—12 i.
- 5 *batata*, w. Ju. 2f. crp, tu: l cor, an-lo, 5-n, so: pd lg: f fas. E.
- 6 *tricolor*, Ju. ☼. l ln-o, g: st dec: f sl.
- 7 *purpureus*, b. p. J. ☼. pu: l cor, en: pd 2 to 5-f: pe no: di of c ln: cps g. S.
- 8 *maehrorrhizus*, w. J. 2f. pu. l cor, en lo, d be e: pd 1 to 5-f: f sub-cm.
- 9 *tenellas*, w. Ju. 2f. st prt: l ln, sub-cor; pd my-f, lg l: style 2-par.
- 10 *aquaticus*, w. J. 2f. st prt: l ol-o, ss: pd 3-f, 3 lg l: style 2-par.
- 11 *obtusilobus*, w. S. 2f. st prt: l thick, sin, lo, em; l rd: pd 1-f.
- 12 *catesbyanus*, p. tom: l ol, ac: pd 1-f, sh than l: bt ov, ot, lg c.
- 13 *paradoxa*, w. prt, tom: l ol, cor, a: pd 1-f, lg l: bt li, rt from f.
- 14 *sherardi*, ☼. prt, pu: l elliptic, re each end, m: f sl, ss.
- 15 *tamnifolius*, ☼. l cor, ac, h; f clustered.
- CONY'ZA. 17—2. 55. Gr. *konis*, dust. Flea bane.
- 1 *marylandica*, p. Au. ☼. her, pu: l ss, br-ln, a, sr; sr at apex cr: cmb tm, fs, l-less: scales of c sb-m: f sh. 12—20 i.
- 2 *bifrons*, y. Ju. 2f. l cls, spt-ol, a, sr: cmb pn glo.
- 3 *camphora'ta*, p. Au. 2f. her, sub-pu: l pe, o-ln, a, sub-re, gld: cmbtm and ax, sh than l: scales of c a, eq to f. 3 f. S.
- COP'TIS. 12—13. 61. Gr. *koptō*, to cut off. Gold thread.
- 1 *trifolia*, O. w. 2f. sep 1-f: l ter. Ro lg, fi. 2—4 i.
- 2 *asplenifolia*, 2f. biter; l sub-pnt: sep 2-f.
- Co'RALLORHI'ZA. 18—1. 21. Gr. *korallion*, coral, and *riza*, root. Coral root.
- 1 *verna*, O. w-y. M. 2f. pt li-ln, spr; lip ol, bi-dt at base. 5—6 i.
- 2 *odontorhiza*, O. p. w. Ju. 2f. lip en, ov, ot; mr cre; spur os, adnate to gm: cps sub-glo. 12 i.
- 3 *multiflora*, p. Au. sep my f, cu-ov, 3-par, re, spotted. 12—15 i.
- CORLOP'SIS. 17—3. 55. Gr. *koris*, bug, and *ōpsis*, appearance. Tickweed.
- 1 *rosea*, r. sml, so: st si: l li, en; ax l; f few, lg-pd, dic, tm rays uneq 3-to. 1 f.
- 2 *trichosperma*, y. Ju. ♂. g; dic: l op, q-pnt, ln, ser: outer l of c cil-sr: rays en: seed wd: 4-to. 2 f.
- 3 *trip'teris*, y. 2f. g: l pe, ln, en; rad ones pnt; cau ter: rays en.
- 4 *dichotoma*, ☼. st g: na, dic ab: l al undi, en, ur into pe: seed ob. 2-3 f.
- 5 *aspera*, l ln-li; up ones al; lower op: st 1-f.
- 6 *lan'ceola'ta*, y. S. 2f. l ss, ln-li, en, cil: pd lg, na: seeds or, sca wi. S

- 7 *crassifolia*, O. y. 2f. l ob-ol, en, ta at base, hir: pd lg, hir at base.
 8 *arguta*, y. 2f. g: l pe, o, ln, ac, a sr: pd ax and tm, dic-cmb.
 9 *latifolia*, y. Au. 2f. l o, ac, cre-to: pe sh: rays en: seed cu, ol, wi.
 10 *amleri*, y. Au. l br-ln, ss, a at each end, en: pd ax and tm, dic-cmb.
 11 *aristata*, O. y. Au. 2f. pu: l q, pnt; l ln, ot, en; lt ones snl.
 12 *pubescens*, y. Au. 2f. pu: l q, pnt; l ln, ot, en; lt ones snl.
 13 *auriculata*, y. S. 2f. pu: l sub-ss, ov-ln, en; lower ter: c di: rays 4-to.
 14 *senifolia*, y. Au. 2f. pu: l ss, ter; l ln, en: rays en: seed cu.
 15 *aurea*, y. 2f. l sr; rad ones 3-parted; cau 3-cleft or en, ln-li.
 16 *palmata*, y. st si, 1—3-f: l ss, sub-cor, pal-3-lo; nr sca: c 8-par. 12 i.
 17 *trifida*, y. 2f. g: l 3-cleft sb, fas: pd tm, 1-f: rays 3-cleft: st fl.
 18 *tenuifolia*, y. S. 2f. g: l op, ss, ter; l com my-par: seg li, en. 2-3 f. S.
 19 *verticillata*, y. Au. 2f. so: l op, ss, ter or q; l li-ln, en: rays a. 2-3 f.
 20 *mitis*, O. y. Au. ♂. g: l bipnt; l li: l of c li: seeds ol, 2-awned.
 21 *acuta*, y. ♂. l o-ln, a, to, h: f cmb-pn.
 22 *procera*, y. 2f. l elliptic, ac, sr, pe, ve, de; up al.
 23 *angustifolia*, y. l li-ln, en, so: rays ol, 3-cleft; middle seg lr.
 24 *nudata*, r. st sub-si; summit dic: l sb, li, rt, g: rays sub-3-to: 2—3
 25 *tinctoria*, y. p. rad l sub-bipnt; l sub-ov, en, g; cau sub-pnt. 1-4 f.
 CORIAN'DRUM. 5—2. 60. Gr. *koris*, bug. Coriander.
 1 *sativum*, w. J. ☼. fru glo: c permanent. E.
 CORISPER'NUM. 1—2. Gr. *koris*, bug, and *sperma*, seed.
 1 *hyssopifolium*, O. Au. ♂. sk tm: l li, w n, unarm: Var. sk tm ax: l n.
 COR'NUS. 4—1. 58. Lat. *cornu*, horn. Dogwood.
 1 *canadensis*, O. w. M. 2f. her: l at top, wr ve: inv o, ac: fru glo.
 2 *succiea*, 2f. st her sub-brh: l all op, ss, o, n from base: u pd; inv.
 3 *florida*, w. y. M. ♂. l o, ac: inv 4, 5 or 6, lr, sub-obcor. 15-30 f.
 4 *sericea*, O. w. J. 2f. brh spr; l o, ac, rd at base, pu be:
 5 *sanguinea*, w. J. ♂. l o, pu, both sides cl alike: cymes spr. 1-12 f.
 6 *circinata*, O. w. J. 2f. brh warty: l br-ov, ac, white-d be: cyme de.
 7 *alba*, O. J. ♂. brh re: brh g; l o a, pu be. 10 f.
 8 *paniculata*, O. w. J. ♂. brh e: l o, ac, ol, ta to base, pu c-p, hoary be.
 9 *striata*, O. w. Ju. ♂. brh, fs: l o; green 2-sides, g: d be: pn convex.
 10 *alternifolia*, O. w. M. ♂. brh warty: l al, o, a, hoary be: spr.
 11 *mas'cula*, ♂. u eq the inv. E.
 12 *asperifolia*, w. J. ♂. brh e, pu: l ov-ln, ac, sca ab, tom be. 4-10 f. S.
 CORONIL'LA. 16—10. 93. Lat. *corouilla*, a little crown or wreath.
 1 *varia*, r-p. Ju. 2f. her, diffuse, g: sti snl, a: 19 to 13, ol, m.
 2 *emerus*, y. ♂. st an; pd about 3-f: claws of pt thrice lg as c. E.
 3 *glauca*, y. M. ♂. l 7, blunt; sti ln: u 10 or 12 f; pd lg than l. 3 f.
 CORONOP'US. 14—1. 63. Gr. *korōnē*, a crown, and *pous*, foot.
 1 *ruellii*, w. Ju. ☼. silicle en; nr m: cmb few-f. S.
 2 *didyma*, O. Ju. ☼. silicles em, in pa, rg: style os: cmb my-f.
 CORY'DALIS. 16—5. 93. Gr. *korudallis*, Fumitory.
 1 *glauca*, y-r-g. J. ♂. co l: st brh, e: l g; cau biter: r sub-cmb; bt sml.
 2 *aurea*, y. M. ☼. st brh, diffuse: l 2-pnt; l di, ln-li, a ends: r one way.
 3 *cuculla'ria*, O. y. & w. M. 2f. co 2-spurred: scp na: r si, l side.
 4 *formosa*, r. M. 2f. scp na: r sub-com, no, my-f: nec sh. 6-10 i.
 5 *fungosa*, O. r-w. J. ♂. st cli: l cirrose: r ax, cmb, no.
 6 *scouleri*, l sub-sl, lg than sub-si r; l ov or ol, de: bt ol, lg than pe.
 COR'YLUS. 19—12. 99. Gr. *korus*, a helmet or cap. Hazle-nut.
 1 *americana*, O. Ap. ♂. l rd, cor, ac: c rd-cm, lr than sub-glo nut; br st.

- 2 *rostrata*, O. Ap. \dot{h} . l ol-o, ac: sti ln-li: c of fru bl-tubular, 2-par.
 3 *avellana*, Ap. \dot{h} . sti ol, ot: c of fru cm, spr at apex, torn-to. E.
 CRAM'BE. 14—2. 63. Gr. *krambe*, cabbage.
 1 *maritima*, w. \dot{Z} . st l so: l sin, gl: flg, cmb, pn: silique 2-joint. E.
 CRANI'CHIS. 18—1. 21. Gr. *krancion*, a helmet.
 1 *multiflora*, root fas, v: l ov-ln, sub-ss: scp iny f, pu towards sum. S.
 CRATAE'GUS. 11—5. 92. Gr. *kratos*, strength. Thorn.
 1 *coccinea*, O. w. M. \dot{h} . l lg-pe, o, a-lobed, sr, g: pe pu, c gl: f pen.
 2 *pyrifolia*, O. w. J. \dot{h} . unarmed: l ov-o, gh-sr, sub-plaited, h: c v.
 3 *cordata*, w. J. \dot{h} . l hr-o, pnt-lo, an, g: pe and c without gld.
 4 *elliptica*, \dot{h} . l ov, uneq sr, g: pe and c gld; div of c ot: ber glo, 5-seed.
 5 *glandulosa*, w. M. \dot{h} . l wd-ob, an, g: pe, sti, and c gld: ov, 5-seeded.
 6 *parvifolia*, w. M. \dot{h} . l ob, sr, en at base, tom: f sml.
 7 *punctata*, O. w. M. \dot{h} . unarm: l wd-ob, g, sr: c v; di sb, en.
 8 *crus-galli*, O. w. M. \dot{h} . l wd-ob, sub-ss, sr: cmb com; l of c ln, sr. \dot{a}
 9 *prunifolia*, \dot{h} . l br: o, uneq sr, g: pe sub-gld: lo of c gld, sr: pd c v.
 10 *latifolia*, \dot{h} . l ob; uneq sr, n sub-v be: sti and lo of c li: cmb v.
 11 *flava*, \dot{h} . l wd-ob, an, g, shining: pe, c, sti gld: f sub-sl. 8—10 f.
 12 *oxyacantha*, w. M. \dot{h} . l ot, 3-cleft, sr, g: pd and c sub-g. E.
 13 *lucida*, \dot{h} . th l wd-ob, cre, cr: cmb si, few-f: styles 5. 10—12 f. S.
 14 *torbinata*, unarm, g: l wd-ob, sr. cmb few-f: pd sh.
 15 *arborescens*, w. \dot{h} . unarm: l ln, a at each end, sr, g ab; n h be.
 16 *viridis*, \dot{h} . th: l sub-ss, spt-o, rd lo, sr, g: c g: di gld sr.
 17 *spathulata*, w. Ap. \dot{h} . th: base lg, ta, 3-cleft, lo, cre, g: cmb my f.
 18 *apiifolia*, w. Ap. \dot{h} . th: l deltoid-o, lo, h: lo sr: c h; di sr: styles 2.
 19 *populifolia*, w. Ap. \dot{h} . th: l ov, sub-tru at base, a-sr, lo. pe gld.
 20 *caroliniana*, \dot{h} . l cor, cu, en, 3-5-lo: pd bt: c l.
 21 *platycarpa*, v. \dot{h} . brh wi ab: lower l ol; up ln a, hir: r lt: bt off fl.
 CRI'NUM. 6—1. 17. Gr. *krinon*, lily.
 1 *americanum*, l ol-ln, g at mr: apex cp: f pe: tube sh than limb. S.
 CRO'CUS. 3—1. 18. Gr. *krokos*, saffron. Saffron.
 1 *officinalis*, y. \dot{h} . l li, with rev mr: stg ex, with lg-li seg. E.
 CROTOLE'RIA. 16—10. 93. Gr. *krotalon*, a rattle. Rattle-box.
 1 *sagittalis*, y. Ju. \odot . hir, e, brh: l si, ln-ol: sti ln, ac, de: r op to l, 3 fl.
 2 *parviflora*, J. \odot . hir, e, brh: l si, ln-li: sti ab de, with 2-sh te: r op l.
 3 *flexuosa*, \dot{h} . l ob, sharp to, h sides; cmb sml; d: brh fl. Fru y: sp lg.
 4 *ovalis*, y. Ju. \odot . hir, brh: l si, ov, pe: up sti de, sh: r op to l, lg. S.
 5 *laevigata*, Ju. \odot . g, e, si: l ln-ol: sti ln, ac, de: r op to l, 3-fl.
 CRO'TON. 19—5. 96. Gr. *krotōn*, a tick.
 1 *maritimum*, O. Ju. \dot{h} . \dot{Z} . l ov or o, sub-cor, ot; pale ab, hoary be. S.
 2 *argyranthemum*, Ju. \dot{Z} . & \dot{h} . l en, ot ob: r tin, sh, my-f: c pd, silv.
 3 *glandulosum*, Ju. \odot . l ol, sr, h be; base en, bearing two gld: st tric.
 4 *ellipticum*, \odot . pu: l elliptic-o, so, green ab: f conglm: styles 3, bifid.
 5 *capitatum*, \odot . tom: l ov ol, ot, en and rd at base; both sides tom.
 CROTONOP'SIS. 19—5. 96. Resembling Croton.
 1 *linearis*, J. \dot{Z} . st c, brh: l stellate-pu ab, scales be. 12—18 l.
 CRYP'SIS. 3—2. 10. Gr. *krupsis*, concealment.
 1 *virginica*, \dot{Z} . sk ol, lo: st prt: joints nm, apx: l inv, pungent.
 2 *squarrosa*, \odot . st dc, brh: few-f: l sh, rigid, pungent. S.
 CRYP'TA. 2—2. 86. Gr. *kryptō*, to conceal. Mud purslane.
 1 *minima*, w-g. st dic, dec, striate: l we-ov or ob, op, ss en ab, stl.
 CUCU'BALUS. 10—3. 82. Gr. *kakos*, evil, and *bolē*, shoot. Bladderwort.

- 1 *behen*, w. Ju. 2f. g, gl, dc: l ol-ov, a, n-less: c inflated, ve.
 2 *nivens*, w. st dic ab: l ol-ln, pu; up o: c ot, bell-form, sub-pilose.
 3 *stellatus*, O. w. Ju. 2f. pu, c: l wr, in fours, ln-ov, lg-ac. 2—3 f.
 4 *douglussii*, h: st e, zigzag: l rt, h-li nr: f pn: c ob, pu.
 CU'CUMIS, 19—16. 97. Lat. *cucumis*, a hollow vessel. Cucumber.
 1 *colocynthis*, ☼. l my-cleft: ber glo, g. Fru bitter. E.
 2 *anguria*, l pal-sin: fru glo.
 3 *anguinis*, ☼. l lo: ber cy, lg, so, plaited.
 4 *melo*, y. Ju. ☼. an of l rd: ol, torulose.
 5 *sativus*, y. Ju. ☼. an of l straight: ber ol, sca.
 CUCUR'BITA. 19—16. 97. Lat. *eucurbita*, a crooked vessel. Squash.
 1 *ovifera*, ☼. l cor, an-5-lo, pu: berry with stripes lengthwise. E.
 2 *verrucosa*, y. J. ☼. l cor, 5-lo; middle lo nr at base: pomaceous.
 3 *melopepo*, y. J. ☼. l cor, ot, sub-5-lo: dt.
 4 *pepo*, y. Ju. ☼. l cor, ot, sub-5-lo: fru flattened: dt.
 5 *citrullus*, y. Au. ☼. l 5-lo sin-pnt, ot: ber ov, so. Fru watery.
 6 *lagenaria*, w. Au. ☼. l cor, rd-ot, pu, with 2 gld at base on un side.
 7 *foetidissima*, Ju. 2f. st prt, sulcate: l al, lg-pe, e, trian-cor, sca. glau.
 CU'NILA. 13—1. 42. Gr. *konilē*, pennyroyal. Dittany.
 1 *mariana*, r-b. J. 2f. l o, sr, ss: cmb ax snd tm. dic.
 CU'PIHEA. 11—1. 91. Gr. *kuphos*, gibbous. Wax-bush.
 1 *viscosissima*, p. J. ♀. l op, pe, o ol: f with 12 s, lt, sl: pd very sh.
 CUPRES'SUS. 19—15. 100. Gr. *kuō*, to bear, and *parisos*, equal. Cedar.
 1 *thyoides*, O. M. ♀. brh cp: l im.
 2 *disticha*, l flat: f pn, l-less: strobile spherical.
 CUS'CUTA. 5—2. 44. Gr. *kassuta*, to set together. Dodder.
 1 *americana*, O. w. Au. ☼. f pd, u, 5-cleft: stg capitate.
 1 *europa*, w. Au. ☼. f sub-ss: stg a: s 4 or 5.
 CYMBID'IUM. 18—1. 21. Gr. *kumbē*, a little boat. Grass pink.
 1 *pulchellum*, O. r. Ju. 2f. rad l ensi, n: scp few-f: lip e at base: spr.
 CYNAN'CHUM. 18—5. 47. Gr. *kuon*, (*kunōs*) dog, and *ageho*, to strangle.
 1 *angustifolium*, y-g. Ju. 2f. twi: l li, en: fu: pd lg of l: di of c li. S.
 2 *lacri*, p. J. 2f. s g: l sub-cor, a, n, pu be: f g; di of co ov-ol, ot:
 3 *scoparium*, g-y. ♀. st twining, n, bih op: l li, rt; u ss, sml f.
 CY'NARA. 17—1. 54. Gr. *kuon* (*kunos*) dog. Artichoke.
 1 *cardunculus*, 2f. l sp, pnt: scales of c o. E.
 2 *scolymus*, 2f. l sub-sp, pnt: scales of c o.
 CYNODON. 3—2. 10. Gr. *kuōn* (*kunōs*) dog, *odous*, tooth.
 1 *daetylon*, Au. 2f. crp: sk digitate, 4—5 spr: ke of c sca: l h on mr.
 CYNOGLOSSUM. 5—1. 43. Gr. *kuon* (*kunos*) dog, and *glossa*, tongue.
 Hound tongue.
 1 *officinale*, O. p. Ju. ♂. soft-pu: l br ln, ss: r pn.
 2 *amplexicaule*, w. b. J. 2f. hir: l ov-ol; up cls: cmb tm, l-less, lg-pd.
 3 *sylvaticum*, b. Ju. ♂. na: l spt-ln, sca be: r scattered. S.
 4 *pilosom?* w. M. h: rad l spt-ol; cau ln-ol, ot; f ax, sub-sk, se.
 CYPE'RUS. 3—1. 9. Gr. *kuparos*, round vessel.
 1 *inflexus*, Au. ♂. u 2—3, si: inv 3-l, lg: sk o hd, ol, 8-f: glu sqr tip.
 2 *flavescens*, O. Au. 2f. sk li-ln, in fas of 3-4: glu ot: style 2-cleft. 6-8 f.
 3 *castaneus*, sk ov-ln, inv three l, lg than u.
 4 *nuttallii*, Au. 2f. culm a-trian: u rad, or sub-ss, loose: rays sh:
 5 *diandrus*, 2f. culm ot-trian: u ss, or l—2 rayed: inv 3-l; two l lg
 6 *dentatus*, u com: inv 3-l, lg u: sk 3 on each ray, al-o, cp, 8-f:

- 7 *erythrorhizos*, Au. u dec: inv 3—6-l, lg: sk al, li; 12-f, t: i f.
 8 *tenuis*, 2f. sk ln, a, 10—17-f: u si: inv 3—4-l, lg rays: ro tu. 8 i.
 9 *phymatodes*, u si or dç: inv 3-9-l; 3-an, 1 lg: pd cp: sk li brh, 15 fl. 1 f.
 10 *compressus*, sk digitate, sub in fours, ln: glu m, br mem. 3—8 i.
 11 *virens*, culm a 3-an: u dec: sk o-ln, capitate: inv lg. 1—2 f.
 12 *mariscoides*, Au. u si or 1—2-ra: sk capitate, li, 7—8 f: glu ot. 8-12i.
 13 *odoratus* sk cmb, sb, rt, glu sub-distant: sml u spr, lg of inv.
 14 *flexica'mis*, st 3-an, u com: sk li-ln, 7-f, (10—12-f,) glu ot: inv lg, rx.
 15 *articulatus*, Ju. 2f. st na, jt e. 3—6 f.
 16 *kyllingaeoides*, hd glo: sk ol, 8-f: inv 4-l, ke l loose.
 17 *strigosus*, S. sk ol, loose; sk sb, ex, rt: sml inv w: u al rays. 3 f.
 18 *alterniflorus*, 2f. sk cmb-u, cp, sub-ss: fal distant: glu br-o: m. 1 f.
 19 *minimus*, st cap, t: sk sl or in pa: inv 1-l.
 20 *fasciculatus*, sk o ol, my-f, ia tm fas: inv 2-l, 1 li, nr. 6 i. S.
 21 *poveiformis*, Ju sk ol, cmb-fas: fascicles ss, and pd: inv 3-l. 8 i.
 22 *autumnalis*, Ju. sk li, tm, digitate, in threes: u lg as 2-l inv.
 23 *vegetus*, Ju. st ot 3-an: u dec: sk ov, in com glu hd: inv lg. 3 f.
 24 *formosus*, 2f. sk o-ln, capitate: inv 6-l, lg, sca at mr.
 25 *filiculmis*, sk ii, in glo hd: u 1-rayed: inv 2-l, st se.
 26 *filicinus*, Ju. 2f. sk li-ln, rt, loose: inv 3-l, lg than u, 1 loose.
 27 *gracilis*, ☼. st a 3-an: 13-an: u com: sk li-ln. 12 i.
 28 *tetragonus*, sk ol, cy: sk 4-an, few-f: sml inv w.
 29 *distans*, sk 1-sided: sk fi, exp: f distant: u straight.
 30 *speciosus*, sk cmb, sk sb 1-sided: u sh sml inv: 2-awned: st a an. 2-4.
 31 *ensten'ii*, Au. sk cmb, ol, brh at base, na: sk nm, cr, li, 6-f: va ol.
 CYPRIPE'DIUM. 18—2. 21. Gr. *kupris*, Venus, and *podion*, slipper.

Lady slipper.

- 1 *candidum*, w. M. ½. st l: 1 ln-ol: lo of style ln, ot: lip cp, sh ln pt.
 2 *parviflorum*, y-g. M. 2f. st l: lo of style trian, a; outer pe ol-ov, ac.
 3 *pubescens*, y. M. 2f. st l: lo of style trian-ol, ot: outer pt ol-o, ac: 15i.
 4 *spectabile*, w. p. J. 2f. st l: lo of style ov-cor, ot: pt br-ov, ot. 18 i.
 5 *acaulis*, w. p. 2f. scape 1-less 1-f: 1 rad, in pa, ol, ot: 18 i.
 6 *arietinum*, w. r. g. M. ½. st l: lo of style or: ot: pt 5: two low ln-li.

CYRIL'LA. 5—1. 51. D. Cyrilli.

- 1 *racemiflora*, w. J. ½. 1 ln, cu at base, cr, so; pt thrice lg as c: 15 f. S.
 2 *paniculata*, 1 cr, wd-ol, ot: f pn: pt ol, spotted.

DAC'TYLIS. 3—2. 10. Gr. *dactulos*, finger. Cock's-foot.

- 1 *glomerata*, J. 2f. pn glo, 1 carinate.

DA'LEA. 16—10. 93. Samuel Dale.

- 1 *ornatum*, sk ol-cy: bt lg than v c: 1 in 2 or 3 pa, ov-ol, g.
 2 *formosa*, p. ½. brh, g: 1 in 5-pa, wd-ol, rt be: sk few-f, sh-pd: bt o.
 3 *aurea*, y. Ju. 2f. e: sk dense, cy: bt rh-o, as lg c: c v: lg, ob. S.
 4 *laxiflora*, w. Ju. 2f. g: st brh ab: brh el: sk pn, el, rt f: bt rd, mu, ke.
 5 *alopeuroides*, b. Ju. ☼. sk cy, pd, trm pa, ov, to summit? re m. 1 f.
 6 *pedunculata*, w. r. Ju. ☼. g: sk ol, ax, sub-erd, sh: pd thrice lg as l.

DALIBAR'DA. 11—13. 92. M. Dalibard. Spice root.

- 1 *repens*, w. J. 2f. v: crp shoots: 1 si, cor, cre: pd 1-f. Troy, rare.
 2 *fragaroides*, y. M. 2f. 1 ter: 1 wd, gh-sr, cil: pd my-f: tube of c obco.
 3 *lobata*, y. 2f. h: 1 rd, cor, lo, cre, cil: st na: pd my-f. 5 i. S.

DANTHO'NIA. 3—2. 10. M. Danthoin. Wild oats.

- 1 *spicata*, Ju. 2f. pn si, ap: sk 7—9, 7-f: in va of co h: 1 sb: she h.
 2 *glumosa*, Jn. culm e: r com: brh 2 and 3-f: sk 9 to 13, 8 and 9 f.

- DAPH'NE. 8—1. 25. Daphne, changed into a laurel. Mezereon.
 1 *meze'reum*, r. w. $\frac{1}{2}$. f ss, cau, in threes: 1 ln. V. re and white f. E.
 2 *odo'ra*, w. Ap. $\frac{1}{2}$. my-f in tm hd: 1 sc, ln-ol, g. 3 f.
 DARLINGTONIA. 15—10. 93. Dr. Wm. Darlington.
 1 *intermedia*, J. $\frac{1}{2}$. armed, her, g: 18 or 9 pa; 120 to 24 pa, ol-li.
 2 *brachy'loba*, $\frac{1}{2}$. unarmed, her, g: 16 to 8 pa; 116 to 24 pa, li.
 3 *glandulo'sa*, $\frac{1}{2}$. unarmed, her, g: 112 to 14 pa; 120 to 30 pa, li.
 DATIS'CA. 20—12. 98. Gr. *datusso*, to endeavor. False hemp.
 1 *hirta*, y: $\frac{1}{2}$. st hir: 1 pnt: 1 run together at base. F sml.
 DATU'RA. 5—1. 41. Arabic, *tôtôrah*. Thorn apple.
 1 *stramo'nium*, O. w-b. Au. \odot . pr sp, e, o: 1 o, g, an dentate.
 2 *tat'rili*, O. b. Ju. \odot . pr spi, e, o: 1 cor, g, to: st red.
 3 *met'l*, C. S. \odot . c sub-inf, t, pr pu pk no sub-glo, sub-cor, sub-en.
 DAU'CUS. 5—2. 60. Greek name of carrot. Carrot.
 1 *caro'ta*, w. J. $\frac{1}{2}$. seeds his: pe n un side: di of 1 nr-li, a. 2—3 f.
 2 *pusillus*, st his: 1 with seg very sml, li-ln: n sml: seeds m, 8-ribs.
 DECUMA'RIA. 11—1. 89. Lat *decema*, tenth.
 1 *barbara*, w. Ju. 1 o-ol, a at each end, sr. S.
 2 *sarmen'tosa*, J. 1 o, a, rd at base, sr at top.
 3 *alata*, st ep: 1 pnt, confluent, li, en. In the sea.
 DELPHIN'IUM. 12—2. 61. Gr. *delphin*, the dolphin. Lark-spur, 5.
 1 *exaltatum*, b. Ju. $\frac{1}{2}$. pe not dilated at bnse: 1 flat, 3-cleft be mid.
 2 *azureum*, b. M. $\frac{1}{2}$. pe dilated at base: 13—5 par, my-cleft: di li 2 f.
 3 *virg'e'cens*, g-w. $\frac{1}{2}$. pu: ne 4-l, sh than 5 pt, inner b: 13-par; div li.
 4 *simpler*, pu: pe dilated at base: 13 par, li di; r si; spur strait.
 5 *consolida*, b. Ju. \odot . ne 1-l: st sub-di. 4 f. E.
 6 *staphisagria*, b. Ap. $\frac{1}{2}$. ne 4-l, sh than pt: 1 pal ot lo. 2 f.
 7 *ajacis*, b. Au. \odot . ne 1-l: st si. 2 f.
 8 *tricorne*, O. b-w. M. $\frac{1}{2}$. pe dilated at base, g: 15-par; di3—5 cleft. S.
 DENTA'RIA. 14—2. 63. Lat. *dens*, a tooth. Tooth-root.
 1 *diphylla*, w. M. $\frac{1}{2}$. st 2-l: 1 ter, o-ol, uneq gh-to: root to. 6—8 i.
 2 *laeviuscula*, p. M. $\frac{1}{2}$. 1 in threes, ter; 13-par; seg ot, gh-to: ro tub.
 3 *heterophylla*, p. w. J. st 2-l; 1 ter, pe; 1 li, sub-ln, a, en; mr rough, cii.
 4 *maxima*, p. $\frac{1}{2}$. 1 nm, al, pe; 1 ter, sub-ov, gh-to: lt ones lo: ax w gld.
 5 *multifida*, p. st 2-l: 1 my-par, seg li, a. 10 i. S.
 6 *tenella*, p. Ap. $\frac{1}{2}$. st 2-l: 1 distant, ss, ter; 1 li-ov, en; pe wd-form.
 7 *dissecta*, p. g, e: st 2-l: 1 my-cleft; di li: fr. 4—5 i.
 DIAN'THUS. 10—2. 82. Gr. *Dis* (*Dios*) Jupiter, and *anthos*, flower. Pink.
 1 *armeria*, r. Ju. \odot . f ag, fas. scales of c ln, v, eq tube. 1 f.
 2 *barbatus*, r. w. Ju. $\frac{1}{2}$. f fas: 1 c o-sb, eq tube: 1 ln. E.
 3 *caryophyllus*, r. w. $\frac{1}{2}$. f sl: 1 c sub-rh, sh: pt cre, b: 1 li-sub.
 4 *chinensis*, Ju. \odot . f sl: scales of c sb, spr, l, eq tube: p cre: 1 ln.
 5 *plumarius*, r. w. $\frac{1}{2}$. f sl: scales of c sub-o, sh, ot, awnless.
 6 *carolinianus*, f ag: pd lg: scales sml than tube. S.
 DIAPEN'SIA. 5—1. 44. Gr. name of Sanicle.
 1 *lapponica*, ces: 1 spt, g: f pd: anthers oblique, w awns.
 2 *cuncifolia*, w. J. $\frac{1}{2}$. crp: 1 ln wd, pu be: f ss: anthers beaked.
 DIARRHE'NA. 3—2. 10. Gr. *dis*, two, *arrene*, rough.
 1 *americana*, Ju. $\frac{1}{2}$. culm e, na, com, sca ab: she sub-pu: pn r.
 DICHON'DRA. 5—2. 44. Gr. *dis*, two, and *chondros*, a grain.
 1 *caroliniensis*, p. J. $\frac{1}{2}$. pu: 1 ren-em, one-cl: c v cil. Crp. S.
 DICHRO'MENA. 3—2. 9. Gr. *dis*, two, and *chroma*, color.
 1 *leucoceph'ala*, Au. $\frac{1}{2}$. inv sub-3-l, white at base: hd white. 1 f.

- 2 *ciliata*, Ju. inv and 1 cil at base: sk ol, ta. S.
 3 *latifolia*, J. 2f. inv my-l, lr, 1 white: hd cp: 1 lg, she st. 9—18 i.
 DICRANUM. 21—2. 4. Gr. *dicranos*, forked.
 1 *cerviculatum*, mo; st si, 1 cap, w-n spr, lax cps ven, e, rec gibbose.
 2 *scoparium*, st ram, 1 ln-o, ac, ke falcate, peshe sl, lid lg-beaked.
 DICKSO'NIA. 21—1. 5. James Dickson, a Cryptogamist.
 1 *pilosiuscula*, Ju. 2f. fr bipnt: 1 de, o-ol, pnt: di sub-4-to: fru-dots sl.
 DIERVIL'LA. 5—1. 58. M. Dierville. Bush honeysuckle.
 1 *canadensis*, O. y. Ju. ½. pd ax and tm, dic, 3-f: 1 o, sr, ac. 2—3 f.
 DIGITA'LIS. 13—2. 37. Lat. *digitale*, finger of a glove. Foxglove.
 1 *purpurea*, p. Ju. ♂. 1 of c o, a: co ot; up lip en: 1 ln-o, rg. E.
 2 *intermedia*, p. Ju. 1 of c ln, eq: co pu; up lip em, 2-cleft: 1 pu at mr.
 DIGITA'RIA. 3—2. 10. Lat. *digitus*, a finger.
 1 *sanguinalis*, ☼. sk nm, fas spr: 1 and she sub-h: sk ol: f pu on mr.
 2 *glabra*, Au. ☼. sk sub-al (3—4,) spr: 1 and she so: sk o, crd. 1 f.
 3 *scrotina*, 2f. dc: 1 and she pu: sk nm, se: sk ped: inf glu minute.
 4 *filiformis*, Au. ☼. culm e, fi; 1 sub-g: sk 2—4, fi e: sk in 3, pe. 18 i.
 5 *paspaloides*, Au. ☼. sk in pa, sub-v at base: rac br, g: f sl, im 2-ways.
 DILA'TRIS. 3—1. 18. Gr. *dis*, double, and *latris*, servant. Red root.
 1 *tinctoria*, y. Ju. 2f. pt ln, d outside: pn emb, d: 1 lg, na, li. 2 f.
 DIODIA. 4—1. 57. Gr. *diodos*, way-side.
 1 *virginica*, w. Au. 2f. g: st pc, t: 1 ln: co g within: fru ol, g.
 2 *tetrago'na*, w. M. 2f. st. pc, sub-an, g: 1 cor o: sti sb. S.
 3 *hirsuta*, -w. S. 2f. hir: st pc: 1 ln: sti se.
 DIONÆ'A. 10—1. 68. Name of Venos. Fly-trap.
 1 *muscipula*, w. Ju. 2f. rad l, im cil ap, sm resembling a rat-trap. S.
 DIOSCO'REA. 20—6. 12. Dioscorides. Yam root.
 1 *villosa*, J. 2f. 1 al, op' wr, cor, ac, pu be, 9-n; lt n si. St cli.
 2 *quaternata*, 2f. 1 verticillate by fours, al, cor, ac, g, 7—9 n; lt n di.
 DIOSPY'ROS. 20—13. 49. Gr. *Dios*, Jupiter, and *puros*, fruit. Persimon.
 1 *virginiana*, w-y. ½. 1 o-ol, ac, g, ve: pe pu: buds g. V. *pu*, 1 ol: a, pu.
 DIO'TIS. 19—4. 29. Gr. *dis*, double, and *ous*, (*otos*) ear.
 1 *lanata*, J. ½. all over hoary-tom: st fi: glm of sk crd. S.
 DIPHYLLE'IA. 6—1. 78. Gr. *dis*, double, and *phullon*, leaf.
 1 *cymosa*, w. J. 2f. g: 1 sub-pal, an lo, sr; lo ac; cyme my-f. S.
 DIPS'ACUS. 4—1. 56. Gr. *dipsakos*, teasel. Teasel.
 1 *sylvestris*, O. b. Ju. ♂. 1 cn, and op, sin: chaff straight: hd inv. 3-4 f.
 2 *fullo'num*, teasel. w. Ju. ♂. 1 ss, sr: chaff hooked. 3—6 f. E.
 DIR'CA. 8—1. 25. Gr. *dirka*, a fountain. Leather-wood.
 1 *palustris*, y. Ap. ½. 1 ov: fax, 2 or 3 in a h bud-like inv. Sml bush.
 DISCOUPLEURA. 5—2. 60. Gr. *diskos*, disk, and *pleron*, rib.
 Bishop weed.
 1 *capillacea*, w. Au. ☼. e pc: u 3—10-rayed; 1 of inv 3 to 5, all trifid.
 DODECA'THEON. 5—1. 35. Gr. *dodeka*, twelve, and *theos*, divinity.
 1 *meadia*, p. M. 2f. 1 ol-ov, re-to: u my-f, lax: bt ov. 8—10 i.
 2 *integrifolium*, b. J. 2f. 1 sub-spt, en; u few-f, straight: bt li.
 DO'LICHOS. 16—10. 93. Gr. *dolichos*, long. Cowhage.
 1 *purpureus*, p. ☼. st g: pe pu: co spr wi. Climbing.
 2 *pruriens* p. ☼. 1 h be: le in r: v ke, li: pd lg threes. E.
 3 *luteolus*, w-y. Ju. ☼. cli. pu: 1 o, ac: pd lg than l: sk sh, sub-cpt. S.
 DON'IA. 17—2. 55. John Don, Scotch botanist.
 1 *squarrosa*, y. Au. 2f. her: 1 cls, sr: scales of c fi at apex, squarrose,

DRA'BA. 14—1. 63. Gr. *drassō*, to sneeze. Whitlow grass.

- 1 *verna*, w. Ap. ☼. sc na: 1 ol, a, sub-sr, h: pt bifid: stg ss. 2—6 i.
- 2 *caroliniana*, w. Ap. ☼. f-apx st na: 1 ov, a, hir: silicles lg-li, g. 2 i.
- 3 *nivalis*, ☼. scp one-l, as: 1 ln, en, sub-tom, with stellate h: pt re.
- 4 *glabella*, ☼. scp 2-l, e: 1 ln-spt, sub-g: r dense-f: silicle ln-o, a.
- 5 *incana*, J. ♂. cau 1 hoary, nm, h: silicle ol, m with a sh style.
- 6 *arabisans*, M. ♂. st 1, brh: rad 1 wd-ln; cau ln, a: pod ac style perm.
- 7 *alpina*, Ap. 2f. scp na, si: 1 ln, en, spr: pe sub-em.
- 8 *hirta*, w. Ap. scp one l: 1 ol, a, dentate, hir: silicle, oblique pd.
- 9 *glacialis*, scp na: 1 ln-li, en, h: pt twice lg as c: silicles lg-r, ol-o.
- 10 *uemoralis*, y. M. brh: rad 1 spt ol; cau ss, or cls, o, pod h. S.

DRACOCEPH'ALUM. 13—1. 42. Gr. *drakōu*, a dragon, and *kephalē*, head.

- 1 *virginianum*, p. Au. 2f. sk el, f crd: bt sb: te of c eq, sh: 1 li-ln sr.
- 2 *denticulatum*, p. Ju. 2f. sk el, rt f: bt sb: te of c eq: 1 ab-ln, to up.
- 3 *variegatum*, sk sh, square: bt o, ac, as lg as c: te of c uneq, 1 ss.
- 4 *canariense*, f sk: 1 ter ol. Gilead herb. E.

5 *cordatum*, b. J. 2f. st pe pu: 1 cor, ot cre, sub-hir ab: sk secund bt.

6 *parviflorum*, w. Ju. ♂. f, sub-capitate: 1 o-ln, sr, pe, bt, sr, o, cil.

DROSE'RA. 5—6. 68. Gr. *drosos*, dew. Sun-dew.

- 1 *rotundifolia*, O. y-w. Au. 2f. scp si: 1 or, nr at base: pe lg, d. 6 i.
- 2 *longifolia*, y-w. Ju. 2f. sub-cau, my-l; 1 spt, or ob lg pe; pe na. 4 i.
- 3 *filiformis*, p. J. 2f. scpsub-ram, t, g. 1 lg, fi: styles 6 to 9. Wet. 1 f.
- 4 *lincar*, 2f. 1 li, ot: pt lg, na: few-f scp: c g.
- 5 *brexifolia*, w-r. J. 2f. sml: scp ro, si: 1 sh, wd, pe: pt ov. S.
- 6 *foliosa*, cau: 1 crd, ov, cu at base, on lg na pe. 4—6 i.

DRY'AS. 11—13. 92. Dryodes, sylvan goddesses.

- 1 *integrifolia*, w. Ju. 2f. sml-l; 1 ov, a, cor at base, en, flat, tom be.
- 2 *octopetala*, w. Ju. 2f. 1 o-ol, to, rg, white-tom be: pd one f.

DULI'CHUM. 3—1. 9. Gr. *du* (*duo*) two, and *lichen*, scab.

1 *spatha'ccum*, O. g-y. Ju. 2f. st t, 3-an ab: 1, 3-ways sk spr, 6-f, sb.

ECHI'NOPS. 17—5. 54. Gr. *echinos*, a hedgehog, and *opsis* appearance. Globe thistle.

1 *spharoceph'alus*, 1 pnt: st brh.. E.

ECHI'TES 5—2. 47. Gr. *echis*, a serpent.

1 *difformis*, w-y. M. Au. 2f. cli: lower 1 li; up ones ov-ln, ac. S.

ECHI'UM. 5—1. 43. Gr. *echis*, a serpent. Bugloss.

1 *vulgare*, b. Ju. ♂. st his: cau 1 ln-his: sk lt: s ex. 2—3 f.

ECLIP'TA. 17—2. 55. Gr. *ekleipō*, deficient.

1 *erecta*, w. Ju. ☼. e, dic: 1 ln at base, sr; pd pa, lg: scales of c o. S.

2 *procumbens*, w. J. ☼? dc: 1 lg ln at base: sub-sr: scales of c ln, a.

3 *brachypoda*, Ju. S. prt, divaricate: 1 ln: pd sl, pa, sh: scales of c ov.

ELAEAG'NUS. 4—1. 24. Gr. *eleia*, the olive.

1 *argentea*, J. ♀. nnarm: 1 ov-ol. a, covered silvery scales: f snb-sl, no.

ELEPHANTO'TUS. 17—5. 55. Gr. *elephas*, elephant, and *pous*, foot.

Elegant root.

1 *carolinianus*, r. Au. 2f. rad and cau 1 ol, sr at base, pilose both sides.

2 *nudicaulis*, r. Au. 2f. rad 1 ov-ln, cre, sr, sub-sca, h be: st h, na. S.

ELEUSI'NEI. 3—2. 10. A name of Ceres. Dog-tail.

1 *indica*, Ju. ☼. sk e in pa, or rachis li: sk ln, 5-f: culm cp. 8—12 i.

2 *crucia'ta*, Ju. O. ☼. sk quarter, m: sk 3-f: ex va c awned. 12—18 i. S.

ELLIOT'TIA. 8—1. 51. Stephen Elliott.

1 *racemosa*, w. J. ♀. 1 al, ln, m, en, sh pe, pu gl be: r tm. S.

ELLIS'IA. 5—1. 43. John Ellis, author of several botanical dissertations.

1 *nyctelea*, w. & b. J. ☼. st dc. brh, l: l al, pe, pnt, rg f sl. 6—8 i. S.
2 *ambigua*, b. M. ☼. st dc, brh, g, gl: l hir, ly-pnt, sub-ss: di sub-ln,
an to or lo: r lt and tm. 4—6 i.

ELY'NUS. 3—2. 10. Gr. *eluō*, to fold up. Wild rye.

1 *virginicus* Ju. 2f. sk e, cp: sk in pa, 2—3 f: f so: glu ln, n. 3—4 f.
2 *canadensis*, Au. 2f. sk no spr, sk 3—5-f: f h, glu sb. 3—4 f.
3 *villosus*, Ju. 2f. sk no spr; f his, pilose: sk p 2-3-f: glu li, pilose-cil, 2-
n, sh than f. 2—3 f.
4 *hystrix*, Ju. 2f. sk e: sk div: c 0. 3 f. Hedge-hog grass.
5 *striatus*, Ju. 2f. sk e: sk 2-f, awned, his pa: cli, n, lg, sk. 3—4 f.
6 *europæus*, Ju. 2f. sk e: sk 2-f, awned, as lg so inv. S.

ELYTRA'RIA. 2—1. 39. Gr. *elutron*, a scale.

1 *virgata*, J. 2f. l en near summit n un so: scales un f o. 12—18 i. S.

EMPE'TRUM. 20—3. 96. Gr. *en*, in, and *petron*, a stone. Crowberry.

1 *nigrum*, h. prt: brh g: l im, ol, g, mr re.

ENE'MION. 12—2. 61.

1 *biterdatum*, 2f. l ter. Probably not distinct.

ENSLEN'IA. 18—5. 47. A. Enslen.

1 *al'bida*, Ju. y-w. 2f. twi: st with al pu line: l op, so, cor-o, ac, sin
at base: cmb ax, my-f, lg pd: pe c pu. S.

EPIDEN'DRUM. 18—1. 21. Gr. *epi*, upon, and *dendron*, a tree.

1 *conopscum*, y. Au. 2f. st si: l ln, sk e: lamina of lip 3-lo. S.

EPIGAE'A. 10—1. 51. Gr. *epi*, upon, and *gē*, the earth. Trail arbutus.

1 *repens*, r. w. Ap. h. st crp: brh pe hir: l cor-o, en: co cy.

EPILO'EIUM. 8—1. 88. Gr. *epi*, upon, and *lobos*, a pod. Willow herb.

1 *spicatum*, O. p. Ju. 2f. l sc, ln-li, ve, g; funeq bt: s declined. 4—6 f.

2 *coloratum*, O. r-p. Ju. 2f. st te, pu, l ln, pe, op; up al, g. 3—4 f.

3 *lineare*, O. w. r. Ju. 2f. st t, pu, brh ab: cau l op, brh-l al. 1—2 f.

4 *molle*, w-p. Au. 2f. densely pu: st t: l ol-li, ss, en; lower op: up
ones al: f pe, sub-tm, regular. 12—18 i.

5 *palustre*, O. p. Ju. 2f. st t: l ss, ln, sub dt; stg undi.

6 *alpi'num*, w-r. Au. 2f. st si, sub-t, 1 or 2-f: l op, ov, en; f ss. 1—3 i.

7 *latifolium*, p. Ju. 2f. l al, ln-o, en, pu, without ve: funeq.

8 *luteum*, y. 2f. st 4-cornered, g: l op; up ones al, ln, ac, serrulate: pd
ax, al, el: di of c nr, lg as pt: style ex: stg thick, 4-lo.

9 *densum*, h: l near each other, sc, ss, ln-li, ot, n: pn pd; bt ol.

10 *leptophyllum*, st brh, sub-sca: l al sub-ss li nr en: g, l-n, a, nr at
base: f ax, sl, pd.

11 *divaricatum*, st brh, g: brh spr: l op, pe: pt ln; a, g, uneq to.

12 *tenellum*, st fi, sub-si: l op, g, ss; nr-li, en, a, l-n: f few tm pd.

EPIPHE'GUS. 13—2. 36. Gr. *epi*, upon, and *phēgas*, the beech.

Beech drops.

1 *virginianus*, O. y. p. Ju. 2f. st brh: f al: c sh, cup-form. 8—12 i.

EQUISE'TUM. 21—1. 5. Lat. *equus*, a horse, and *seta*, hair. Horsetail.

1 *arvense*, O. Ap. 2f. st si brh; sca, 4-sided: fru si: she cy, gh-to. 8 i.

2 *hyemal'e*, Ju. 2f. st e, sca, sk at apex: she 2-cl, at base and apex. 2-3 f.

3 *sylvaticum*, O. Ap. 2f. fer st 2-brh; brh sca, 4-sided; brh 3-sided.

4 *limosum*, Ju. st brh up, brh 12 in wr, si pentagonal, so. 2—4 f.

5 *scirpoides*, O. Ju. 2f. st si, as, g, fi, bearing sk at top: she 3-to; te
withering, awns at apex. 3—6 i.

6 *uligino'sum*, 2f. st e, rd, so, sm brh; brh from middle jt uneq t0 black.

7 *palustre*, J. 2f. st si ram, g fnr: brh 5-an sk at apex.

8 *torreyanum*, 2f. st brh; brh rough, 6-an ep to st: sk tm.

ERIAN¹THUS. 2—2. 10. Gr. *crion*, wool, and *anthos*, flower.

1 *alopecuroides*, p. S. 2f. h-like inv lg c: awns straight. 6—10 f. S.

2 *brevisbarbis*, p. 2f. pn sm spr: h-like inv sh than c: awn straight. 3—5 f.

3 *strictus*, p. Au. inv sh, or none: pn ap; brh rt: pd 2-f: awns straight, twice lg as c. 4—6 f.

4 *contortus*, Oc. 2f. h inv lg as c: va of co eared; awn twisted.

ERI¹CA. 8—1. 51. Gr. *erikō*, brittle. Heath.

1 *pubescens*, r. M. co li, pu, limb e: cps g: l fringed. E.

2 *tetralix*, h. anthers awned: co o: style enclosed: l fairs, cil: f in hd.

ERI¹GERON. 17—2. 55. Gr. *ēr*, the spring, and *gerōn*, an old man.

1 *alpi'num*, p. Ju. 2f. v: st 1-f: c v: rays spr: 1 ln, ot. 2 i.

2 *bellidifolium*, O. b. & w. M. 2f. hir, hoary: rad and cau lob, sub-sr; up few, ln, ss, en: st 3—8 f: rays lg. 12—18 i.

3 *integrifolium*, w. Ju. 2f. st si, l, so: 1 ln, en, 3-n: f cmb; c hem. 2 f.

4 *purpureum*, O. p. Ju. 2f. pu: 1 ol, to, cls; up en: pd cmb; lower el: scales of c b on ke; rays twice lg as c. 2 f.

5 *compositum*, w-r. Ju. 2f. sub-stless: rad 1 lg-pe, thrice 3-par: di li; cau 1 li, undi: st na ab, 1-f. 8 i.

6 *philadelphicum*, O. b-p. Au. 2f. pu: 1 wd-ol, gh-to; cau half-cls: st si. cmb ab: pd el, 1-f: rays cap, twice lg as hem c. 1—3 f.

7 *strigosum* O. w. Ju. ♂. h 1 ln, ta both ends: middle few tceth. 2—3 f.

8 *heterophyllum*, w. J. ♂. rad 1 rd-o, to, pe; cau ln, a, in middle. 2—3 f.

9 *nercosum*, y. w. Ju. 2f? pu: 1 ln-li, en, silky, n: f pn.

10 *hys'sopifolium*, y. Ju. 2f. st pn, brh, few prt into na pd: 1 li, g, cil.

11 *canadense*, O. w. Ju. ☼. st his, pn: 1 ln-li, cil: c cy: rays erd, sh. 4 i

12 *pumilum*, w. 2f. hir: st si, 1-f: 1 li, en, ss, w n: c hir. 4—5 i. S.

13 *nudicaule*, w. y. J. 2f. g: rad 1 ln-spt, a, to: st si, 1-less, lg: tm cmb few-f: rays lg as inv. 2 f.

14 *quercifolium*, b. w. Ju. 2f. pu: 1 ln, a; rad ly, to; up en: st sub-si, few-f 3 at summit: rays twice lg as c. 8—10 i.

15 *longifolium*, y. Au. g: st pn: brh straight: 1 lg-li, straight: c o.

16 *ambiguum*, w-y. pu sub sca: 1 li: lower sr: f sml, in pa, ax tm. 18 i.

17 *asperum*, w. Au. hir-sca: st 2-f, 1 ln, a, en: c hem. 12 i.

18 *glabellum*, w-b. Au. 2f. 1 ln-li, so, a; rad lg-pe, ln-spt, n. 12—18 i.

19 *divaricaion*, Au. ☼. de, brh: pn sub-fs: 1 sb: f of disk 4-cleft.

ERIOCAU¹LON. 19—4. 13. Gr. *crion*, wool, and *kuulos*, a stem. Pipe wort.

1 *pellu'cidum*, O. g. Au. 2f. sep 7-striped: 1 li-sb, g, 5-n, hd sml. 6—12 i.

2 *decangulare*, w. S. 2f. sep 10-striped: 1 g: hd lr: 1 inv o, a. 3—4 f.

3 *flavidulum*, Ju. ☼. or 2f. sep nm, 7-furrowed, pu: 1 sh, sb: hd convex: scales of inv rd. 2—4 i.

4 *gnaphalioides*, Ju. 2f. sep sub-cp 10-fur: 1 sh, sb, ensiform, g. 10—14 i.

5 *villosum*, 2f. sep nm, cp, 4-fur, v: 1 sh, sb, li, h; hd sml sph. 12 i. S.

ERIOCO¹MA. 3—1. 10. Gr. *crion*, wool, and *komē*, hair.

1 *membranacea*, l fi, g: pn lax: pd fl: scales of c 3-n, lg ac: co sh c, v, h exceed co: awn na, lg c. S.

ERIOGO¹NUN. 9—2. 28. Gr. *crion*, wool, and *gonu*, the knee.

1 *parvifolium*, c na. cau l pe, al, o, or-re ab, tom be.

2 *latifolium*, c na: cau l al, pe, cor, d ab, woolly be: pe cls.

- 3 *tenellum*, 2f. st dic, na, g: brh el, bearing fas of f st extremities: f minute: di of c rd, ot, g: l o, cor, d be, pu ab. 12 i.
- 4 *umbellatum*, 2f. st na, si: pd el, u bearing si inv at apex: c g, di ob, nr at base, ot: l ob-spt, be, sm gab. 8 i.
- 5 *mentosum*, Ju. 2f. l ov, wd at base, gab, d be; caul in threes and fours: fas f ax, sl, ss. 2 f. S.
- 6 *sericeum*, y. Ju. 2f. st si, na: f fas, tm u, pd: u inv: di of c ol, a, rad l pe, ln-ol, v ab.
- 7 *pauciflorum*, w. 2f. st si, l at base: u few-f: f sub-ss: l ln-li d.
- ERIOPH'ORUM. 3—1. 9. Gr. *erion*, wool, and *phero*, to bear.
- 1 *alpinum*, Au. 2f. culm sca, na: l sh, sb: sk ol woolly h few. 8—10 i.
- 2 *vaginatum*, Ju. 2f. culm t. ot-trian ab, so rigid: she inflated. 12 i.
- 3 *polystachyum*, Ju. 2f. l flat, 3-an at apex culm t: sk no. 18—24 i.
- 4 *virginicum*, J. 2f. culm t below, ot trian ab: l flat, lg: sk clustered, e, sub-ss: inv 2—3 l. Var. l fi. 2—4 f.
- 5 *angustifolium*, J. 2f. culm trian: l channelled 3-an: pd so.
- ERO'DIUM. 15—5. 73. Gr. *erodios*, a heron. Stork.
- 1 *cicutarium*, p. Ap. ☼. st prt, rough-h: l gh-pnt; seg ss, gh-pnt: pd my-f: pt uneq. Var. caulescent, seg pnt, li lo. 6 i.
- 2 *ciconium*, ☼. pd my-f: l pnt: l pnt, to: pt ol, ot: st as. E.
- 3 *moschatum*, ☼. pd my-f: l pnt: l sub-pe, ol, gh-to: pt eq c: st prt.
- ER'VUM. 16—10. 93. Lat. *ervum*, from *eruo*, to pluck out. Vetch.
- 1 *hirsutum*, p. J. ☼. pd my-f: le hir, 2-seeded: l li, tru.
- 2 *tetraspermum*, b. J. ☼. pd 2-f: le so, 4-5-seeded: l ol, tru.
- ERYN'GIUM. 5—2. 60. Gr. *eruggion*, to eruct.
- 1 *aquaticum*, w-b. Ju. 2f. l ensiform, fringed sp; fl undi, sh. 3—4 f.
- 2 *virginianum*, g. b. Ju. 2f. tall: l lg-ln, sr: inv lg than hd. 4—6 f.
- 3 *ovalifolium*, b. Ju. 2f. l spt-o, to: hd sh inv: ch eq 3-cus. 2—3 f.
- 4 *diffusum*, w. ☼. st dic-brh: l pal: di ol, gh-sr, sp: hd sub-glo: l of inv 4—6, 3-cleft, gh-sr, lg hd: germ squamose. 6—8 i.
- 5 *foetidum*, Ju. 2f. rad l ln, sr; fl my-cleft: st dic. 1 f. S.
- 6 *aromat'icum*, Oc. 2f. st l: l pnt, 3-cleft cr mr. 9—10 i.
- 7 *gracile*, Ju. ☼. l pe, ov, en: st brh; hd nm, sml: iuv 2-l, 3-cleft, li.
- 8 *pluknctii*, w-b. J. l lg, li-ln, sr: inv 8-l, lg than hd: ch 3-awned. 2 f.
- 9 *prostratum*, 2f. sg crp fi: l pe, o, not prickly, sm en, or teeth lo increasing base: hd ax, pd, o: l of iuv 5, ol-li, en: ch li, sml, sm none.
- 10 *baldwinii*, l pe, ov: st brh, prt: hd nm: l of inv twice 3-par; lo li.
- ERY'SIMUM. 14—2. 63. Gr. *eruō*, to draw. Cress.
- 1 *nasturtium*, w. J. 2f. silique sh: l pnt, l rd, re, to.
- 2 *palustre*, y. Ju. ☼. l ly-pnt; lo uneq dt, so: pt lg of c. 12—18 i.
- 3 *amphibium*, O. y. J. 2f. silique ol-o, declined: l ln-ol, pnt or sr. 1—2 f.
- 4 *vulgare*, y. J. 2f. silique pnd: l pnt; l ln, gh-sr.
- 5 *laucolatum*, pu 2-par, cp: st sub-si: l ln-li, lower to: claw lg c: pod lg, e: stg em. White rg.
- 6 *walteri*, y. Feb.—M. 2f. brh, prt: l pnt; seg ot, sin. 6—14 i. S.
- 7 *cheiranthoides*, g. l ln, sub-sca, green: siliques, e, spr, twice lg as ped.
- 8 *asprum*, l li-ol; lower to-run, sca-pu: siliques spr, style sh thick.
- ERYTHRI'NA. 16—10. 93. Gr. *eruthros*, red.
- 1 *herbacea*, r. M. 2f. sml: l ter; l rh, g: sk lg: st her, prickly. 2—4 f. S.
- ERYTHRO'NIUM. 6—1. 14. Gr. *eruthros*, red. Adder's-tongue.
- 1 *americanum*, O. y. Ap. 2f. l ln-ov: pt ol-ln, ot at point; inner 2-dt base; stg 3-lo: l spotted. 6—8 i.

- 2 *albidum*, b-w. Ap. 2f. l-ln; pt li-ln, ot; inner w to. 6—8 i.
 3 *bracteatum*, y. J. 2f. scp bt, sh l, ln, uneq: style club, stg united.
 4 *grandiflorum*, w-y. J. 2f. pt ln, unguiculate, a; gm ol: l-li-ln. S.
 EUCHRO'MA. 13—2. 36. Gr. *eu*, beautiful, *chroma*, color. Painted cup.
 1 *coccin'ea*, y. & r. J. ♂. l al, li, gh-pnt; di li: bt 3-cleft, lg f: c 2-cleft, di re, em. F yellow, scarlet bt. "10—16 i.
 2 *grandiflora*, g-w. M. 2f. l bt 3-cleft; seg divaricate: c 4-par. S.
 EUON'YMUS. 5—1. 95. Gr. *eu*, good, *nomos*, name. Spindle tree.
 1 *atropurpu'reus*, p. J. ♂. l pe, ln-ol, ac, sr: pd divaricate. 4—5 f.
 2 *americanus*, r-y. J. ♂. brh 4-an. so: l sub-ss, ln-ov, a, sr; pd 3-f; fall 5-cleft: fru red. Var. st ro, a 4-an: l sub-ss, opaque. 3—4 f.
 3 *obovatus*, p-g. J. ♂. st prt, ro; twigs e, ot 4-cornered: l br-ob, ot, a at base, sub-ss, a sr, flat: pd 3-f. S, pt, sin but 4. 1 f.
 4 *angustifolius*, Ju. ♂. brh 4-an: l lg-li, ensiform, en: pd 1-f. S.
 EUPATO'RIMUM. 17—1. 55. Eupator king of Pontus. Bone-set.
 1 *hyssopifolium*, w. Au. 2f. st e: lowest l op, ln-li, sub-dt: cmb sub-fs: style much lg than co. 2 f.
 2 *linearifolium*, 2f. st sub-prt, v summit: cau l op, ln-li. 1—2 f.
 3 *sessilifolium*, w. Au. 2f. l ss, cls, distinct, ln-o, rd at base, sr, g. 2 f.
 4 *truncatum*, w. Ju. ♂. l ss, cls, ln, tru at base, sr, sm g: st pu.
 5 *album*, Au. 2f. l sub-ss, ln-ol, sr: scales c lg, ln, sca, cl. 18—24 i.
 6 *lanceolatum* Au. 2f. l ss, ln-ol, sca, sr at base: scales of c 1-cl.
 7 *verbenacifolium*, w. Au. 2f. l ss, ln-o, rg, sca; up coarse teeth at base, summiten. 2 f.
 8 *melissoides*, w. Au. 2f. l pe, o, ot, ot-sr, ve, g. 1—2 f.
 9 *rotundifolium*, w. Au. 2f. l ss, rd, gl, ot-sr, ve: scales of c ac. 12—18 i.
 10 *pubescens*, w. Au. 2f. l ss, o, sub-sca ve; lower ones sr, up sub-sr: st pn, pu: brh fs. 18—24 i.
 11 *altiss'imum*, w. Au. 2f. l sub-ss, ln, 3-n, ta ends, pu. 3—7 f.
 12 *amocnum*, p. S. 2f. l sh pe, op, ln-ol, a at ends, sr, sub-g, rg, ve be: cmb crd: scales of c ol, cl, a. 2 f.
 13 *trifoliatum*, p. Au. 2f. l pe, in threes, fours, o, ov, ac, sr, pu. 3—4 f.
 14 *ceanothifolium*, Au. 2f. l pe, o, ac, to, 3-n, sub-g: c 5—10 f. 2 f.
 15 *purpu'reum*, O. p. Au. 2f. l in fours or fives, pe, ln-o, sr, rg-ve, roughish: st hollow. Var. c 5-f: l in fives, pe, ln, g both sides. 4—6 f.
 16 *maculatum*, p. Au. 2f. l in fours or fives, ln-o, sr, pu be. 4—5 f.
 17 *verticillatum*, p. Au. 2f. l pe, in threes or fours, ln-o, ac at each end, uneq sr, g: st so. 4—6 f. Joe-pye, also purpureum.
 18 *punctatum*, p. Au. 2f. l in fours or fives, pe, o, ac, sr, sca sides. 3—5 f.
 19 *perfoliatum*, O. w. Au. 2f. l con-ol-sr, rg, d be: st v. 2 f.
 20 *coelest'num*, b. Au. 2f. l pe, hr-o, ot, 3-n, ot-sr, sca: c-my-l, my-f: 30—40 rec conic. 2—3 f.
 21 *ovatum*, w. Au. 2f. h, sca: l op, ss, o, ot dt: cmb fs: c 8-f. 3—4 f.
 21 *aromaticum*, w. Au. 2f. l pe, cor-o, a, 3-n, ot sr, sm sca. 2 f.
 33 *ageratoides*, w. Au. 2f. l pe, o, ac, 3-n, uneq to, sr, g. 2—4 f.
 24 *foenicula'ceum*, y-w. S. 2f. st pn: l g: lower pnt. 3—10 f. S.
 25 *coronopifolium*, w. S. 2f. st pn: lower l pnt: di ln-li; up l undi, li: all pte, pu. 3—4 f.
 26 *cuneifolium*, l pe, ob-ln, sr at summit, 3-n, pu. 1 f.
 27 *falcatum*, w h: l in fours, ln-ov; ac each end, sr: scales of c sh, ov.
 28 *pinnatifidum*, 2f. l pnt; lower: up al; di li, pu: f cmb. 3—4 f.
 29 *glaucescens*, w. S. l ss, ln, ot sr, en at base, 3-n, gl, pu: f cmb. 2 f.

- 30 *parviflorum*, w. S. 1 ss, nr-ln, a sr, pu on both sides: f cmb, sml. 2 f.
 31 *scrobinum*, w. S. 1 pe, ln-o, ta summit, a, a sr, 3-n, pu. 5—6 f.
 32 *incarnatum*, p. Oc. 1 lg pe, cor, a, ot to, 3-n, g: scales c eq. 2 f.
 EUPHROB'EA. 19—1. 96. Euphorbus, king of Mauritania. Spurge.
 1 *corollata*, Ju. 2f. u 5-cleft, 3-cleft, dic: inv and 1 ol, ot: pt ob, resemb
 appenda of c. Var. 1 li-ln, ss, h be: u 3-cleft: rays el. 1—2 f.
 2 *peplus*, Ju. ☼. u 3-cleft, dic; inv o: 1 en, ob, pe.
 3 *obtusata*, Ju. 2f. u 3-rayed, dic: inv o, ot, sub-cor: 1 al, ss, spt, sr,
 so: cps muricate. 12—18 i.
 4 *mercuriali'na*, Ju. 2f. st si 3-cleft: 1 op ter, sub-ss, ov, en, pd tru.
 5 *pilosa*, O. Ju. 2f. u with 5 rays: inv o: 1 ln, sm h: seg inv en. 1—2 f.
 6 *helioscopia*, ☼. u 5 primary rays, bifid: inv ob: 1 wd, sr, g. 12—18 i.
 7 *hypericifolia*, Ju. ☼. dic, g brh, sub-e, spr: 1 op, sr, ov-ol, sh-pe: cmb
 tm, ax. Var. st h: 1 ol, so, sr. 12—18 i.
 8 *maculata*, Ju. O. ☼. st prt, c, brh, h: 1 op, ov ol sr, base, sh pe, so, ab,
 h be: f sl and ax, sh than l. 6—12 i,
 9 *polygonifolia*, Ju. 2f. g: 1 op, en, ln-li, ot at base: f sl, ax: sti si.
 10 *ipccacuan'hae*, Ju. 2f. prt, sml, g: 1 op, obov or ln: pd ax, el, 1-fl.
 11 *portalacoides*, Ju. 2f. e: 1 en, ov, re: pd ax: 1-f, as lg as l.
 12 *dentata*, Ju. ☼. h: 1 op, ov, dt: f crd at summit of st.
 13 *lathyrus*, J. ♂. u 4-cleft, dic: 1 op, en, ln, pointing 4 ways. E.
 14 *cyathopora*, O. Ju. ☼. sub-shrubby: 1 pe, o, to gui: up inv cl. 2 f. S.
 15 *graminifolia*, sml, e, brh from base, pu: 1 sc, li, en; up discl base.
 16 *thymifolia*, O. prt, pu: 1 op, ov-ol, ot, sr near summit; hd ax, ss.
 17 *pubentissima*, w. Ju. 2f-e, pu: st dic: 1 op, ss, ov, sub-cor, ot.
 18 *marginata*, w. Ju. ☼. u 3-cleft, twice dic: inv l-like; inv ol, cor, cl,
 mem at mr: 1 ln-ol, sub-cor-cl, a, gl, g: pt of c rd: cps pilose.
 19 *cordifolia*, w. M. ☼, prt, g, brh: 1 sml, op, br-ov, en, cor base. 8—15 i.
 20 *gra'cilis*, J. 2f. st e, dic, g: 1 op, rt, ss, ln-li: pd sl, in di, st. 12 i.
 21 *paniculata*, Au. u 3-cleft, dic: f tm, sm pn, ov, ss, h be: st h. 1—2 f.
 22 *hex'ago'na*, tall, brh: 1 li: f in ax clusters.
 EUPHRA'SIA. 13—2. 36. Gr. *cuphrainō*, to exhilarate. Eye-bright.
 1 *officinalis*, w. Ju. ☼. 1 o, ot to: di of lip em.
 2 *latifolia*, p. Ju. ☼. 1 o, to-pal: f sk: co tubular: di of lip ot.
 EVOL'VULUS. 5—2. 44. Lat. *evolvo*, to roll outward.
 1 *argenteus*, p. M. 2f. st si, e: 1 ol, a, tom both sides: pd 1-f, sh.
 2 *mumularis*, ☼. 1 rd: st crp: f sub-ss.
 3 *scriceus*, O. ☼. 1 ln, ss, be: pd sh, 1-f.
 EX'ACUM. 4—1- 46. Gr. *ex*, out, and *ago*, to drive.
 1 *pulchellam*, r. Au. ☼. co 4-cleft: c 4-par; disb: pn cmb: pd fi.
 FA'GUS. 19—12. 99. Gr. *phago*, to eat. Beech.
 1 *fer'ugin'ca*, O. y-w. M. ½. 1 o-ol, ac, pu be, to, at base ot. 40—60 f.
 2 *sylvatica*, y-w. M. 2f. 1 o, ac, to, cil at mr, a at base. 50—100 f.
 FE'DIA. 3—1. 56. Gr. *pheido*, harmless. Lamb lettuce.
 1 *radiata*, w. J. ☼. st dic: 1 spt-ol, sub-en: fru pu, 4-sided. 8—18 i.
 2 *chenopodifolia*, ☼. dic: 1 o, a: cyme na, divaricate dic. 8 i.
 3 *olitoria*, st dic: 1 ln-li. E.
 FER'ULA. 5—2. 60. Lat. *ferio*, to whip.
 1 *villosa*, w. Ju. 2f. 1 dec; di ter; 1 o, sr, rigid, vnt: st, pd, u, v.
 2 *foenicula'cca*, y. 2f. stless, pu: 1 dec, sub-biter-pnt; di at base decussate:
 seg sh, nr-li, a; di 3-cleft: inv 5-7-lo. 1 f. S.
 3 *nudicaulis*, w. M. 2f. 1 rad, thrice ter; 1 uneq-to: ray u el

FESTU'CA. 3—2. 10. Celtic *fest*, pasture. Fescue.

1 *clatior*, O. J. 2f. pn spr, brh, lax: sk o-ln, 4.5-f; f arm. 3—4 f.

2 *myurus*, J. ☼. ♂. pn crd, eq: sk 4-f: f sb, awned, h. 6—12 i.

3 *tenella*, J. ☼. pn sk, si, 1-sided: sk 9-f: brs sh than sb f. 8—15 i.

4 *duriuscula*, J. 2f. pn 1-sided, ol: sk 5-6-f, t: f tm by sh brs. 12—18 i.

5 *rubra*, J. 2f. pn 1-sided, e, spr: sk t: f lg than brs at tips. 18 i.

6 *pratensis*, J. 2f. pn spr, brh: sk li, my-f, a: l li: ro fi. 1—2 f.

7 *poaeoides*, pn crd; lower brh si: sk al, ol, sub-ss, unarm: l flat, g.

8 *nutans*, J. 2f. pn at lg no: brh lg, in pa, na below: sk o, 3-5-f: f sm ot, unarm, n-less. 3 f.

9 *fascicularis*, E. Au. ☼. culm prt: pu: brh straight, sk-like. 1 f.

10 *elandestina*, pn in she: brh sl, si: sk 10-f; f awned. 8 i.

11 *spicata*, J. sk al, ss, e, sm 5-f: f sb, sub-g, sca awn: li l g. S.

12 *grandiflora*, pn si, e: sk few, 7-f: f a, distant.

13 *parviflora*, Ap. 2f. pn eq. appressed. sk t-sb, 5-f, awned. 12—18 i.

FR'CUS. 20—3. 98. Fig.

1 *carica*, g. Ju. ♀. l cor, 3 or 5-lo, re-to: lo ot, sca ab. 5—8 f. E.

FIMB'RISTY' LIS. 3—1. 9. Lat. *fimbria*, a fringe, and *stylis*.

1 *spadi'ceum*, Ju. 2f. sk o-ln: inv l l lg than u: l sb, t, striate. 2—3 f.

2 *ferrugineum*, 2f. st cp: an summit sca: l concave, those of inv uneq cil: sk ln, rd. 1—3 f.

3 *castaneum*, Ju. 2f. sk o-ol, ot: inv 2-l, rigid, lg as com u. S.

4 *cylindricum*, 2f. sk cy, ot: inv 1-l, eq si u.

FLOER'KEA. 6—1. 61. Floerke, a German. False mermaid.

1 *uliginosa*, w-y. Ap. 2f. l al; un ter, ab water q-pnt.

FOTHERGIL' LA. 11—2. 78. John Fothergill. Witch alder.

1 *alnifolia*, w. Ap. ♀. l wd-ob, cre-to ab. Var. has o-ol l, sub-cor. S.

FRAGA'RIA. 11—13. 92. Lat. *fragro*, to perfume. Strawberry.

1 *virginiana*, O. w. M. 2f. c of fru spr: h on pe e, on pd cp: l g ab; pd few: rec of seed ol.

2 *canadensis*, w. M. 2f. lr: l br-ov, lt ones pe: pd nm, pnd: rec of seed glo, v: c of fru e, cohering.

3 *vesca*, w. M. 2f. c of fru rx: h on pe spr, on pd cp. E.

4 *clatior*, w. 2f. c of fru rx; h on pd and pe spr.

5 *grandiflora*, w. 2f. c of fru e: h on pd and pe e: l co, g ab.

FRASE'RA. 4—1. 46. John Fraser. Columbo.

1 *carolinensis*, r. & y. Ju. ♂. l wr or op: f in clusters. 3—6 f.

FRAX'INUS. 20—2. 34. Lat. *fraxinus*, the ash.

1 *sambucifolia*, O. M. ♀. l ss, ln-o, sr, rg, rd-oblique at base; ax of ve v be: f na, not c.

2 *acuminata*, O. w-g. M. ♀. l pe, ol, shining, ac, en, to, gl be: f c.

3 *pubescens*, ♀. l pe, ov-o, sr; pe brh d be: f c. Var. l nr, ln-o, sub-sr.

4 *juglandifolia*, ♀. l pe, o, opake, sr, gl be; ax of ve pu: brh g.

5 *eptera*, M. ♀. l ln-ov, sub-sr: cps wd, ot-em at apex, t below.

6 *platycarpa*, E. Ap. ♀. l pe, sr, like fru, ln-elliptic.

7 *caroliniana*, Ap. ♀. l pe, ln, sr, g: brh g: f c.

8 *triptera*, ♀. l ob, en, sub ss, tom be, oblique at base: fru br, ob. S.

9 *quadrangulata*, ♀. l sub-ss, ln-ov, sr, pu be: samara ot at each end.

FRITILLA'RIA. 6—1. 14. *fritillus*, a chess board. Crown Imperial.

1 *lanceolata*, p. Ju. 2f. st l, 1-2-f: l ln-li, ot; lower wr: pt ln. S.

2 *alba*, w. Ap. 2f. gl: l rt, al, ss, ol-li, flattish, ot, sub-striate be. 1 f.

3 *imperialis*, r. y. M. 2f. f un a l, no: l ln-li, en. E.

- 4 *metea'gris*, p. & y. M. 2f. 1 al, li: st 1-f: nec li: f checked. Fu'CHSIA. 8—1. 88. L. Fuchs, a German. Ear-drop.
- 1 *magellanica*, r. pd ax, 1-f: 1 op or in threes, en: f pnd. E. Fu'CUS. 21—2. 4. Gr. *phukos*, a sea weed, red color.
- 1 *nodosus*, st cp, inf with internal vesicles: rec lt: stalk pyriform.
- 2 *vesiculosus*, fr flat-ribbed, li: dic en, vesicles: sph, innate upon fr: pd rec, tm elliptical. 24 i.
- FUIRE'NA. 3—1. 9. Geo. Fuiren.
- 1 *squarrosa*, Ju. 2f. sk 5—6, o: culm so: 1 cil: she h: va of co cor-o. Var. culm pu ab: 1 so: throat of she h: sk 1.3, tm. 18 i.
- 2 *his'pida*, Au. 1 lg, with she his: st his ab: hd my. 1—2 f. S.
- FUMA'RIA. 16—6. 93. Lat. *fumus*, smoke. Fumitory.
- 1 *officinalis*, r. J. ☼. st brh, spr: 1 dec; 1 ln-wd, gh. 6—10 i.
- FU'NARIA. 21—2. 2. Lat. *funis*, a rope.
- 1 *hygrometrica*, 1 o, a, concave, en, inflected: cps swelling: pe lg, twisting spirally when dry.
- GALAC'TIA. 16—10. 93. Gr. *gala*, milk. Milk-way.
- 1 *glabella*, r. & w. J. 2f. prt, sm twining, g: 1 ter: 1 ov-ol. ot, em at both ends: r ax, lg as l: le v.
- 2 *mollis*, r. w. Ju. 2f. twining, soft pu: 1 ter, o-ol, ot, so, gl be.
- 3 *villosa*, p. Ju. 2f. pilose: 1 ter; 1 ol-o: ot, be: r ax, lg than l. S.
- 4 *elliotti*, w. J. 2f. 1 pnt; 1 ov, em, gab, pube: r lg, few-f.
- GALAN'THUS. 6—1. 17. Gr. *gala*, milk, and *anthos*, flower. Snow-drop.
- 1 *nivalis*, w. Ap. 2f. 1 li, ke, a, rad: sep 1-f. E.
- GALAR'DIA. 17—3. 55. M. Gaillard, French.
- 1 *pinnatifida*, y. p. 1 pnt; di ln-li, sm en. 8 i.
- 2 *bicolor*, O. p. J. 2f. 1 al, ss, ln-li, a, pu, sr, cil; f sl, tm: scales of o ln, a, pu; rx; inner e: ch of egret en, awned. 2 f. S.
- GA'LAX. 5—1. 83. Gr. *galax*, milky.
- 1 *rotundifolia*, w. J. 2f. g: 1 rd-reniform, to; sk lg. S.
- GALE'GA. 16—10. 93. *Gala*, milk. Goat rue.
- 1 *virginiana*, O. r. 2f. e, whitish d; 1 17 to 21, ln-ol, ac: r tm, sh.
- 1 *chrysophylla*, prt, pu; 1 pnt, in fives, snb-ss: 1 cu: pd op l, lg, 3-f. S.
- 3 *hispid'ula*, r. M. 2f. st e, pu, pic: 1 pnt; 1 11—15 ov, sub-re: m.
- 4 *paucifolia*, r. M. 2f. st dc, v: 1 pnt; 1 ov, wd at base, v be: pd lg l.
- GALEOP'SIS. 13—1. 42. Gr. *galē*, a weasel, and *opsis*, appearance. Flower nettle.
- 1 *tetra'hit*, O. r. & w. Ju. ☼. st thicken up: 1 o, his, sr: c prickly. 2 f.
- 2 *ladanum*, r. Ju. ☼. st h: internodes not swollen: 1 ln, sub-sr, h. 1 f.
- GA'LIIUM. 4—1. 57. Gr. *gala*, milk. Bed-straw.
- 1 *trifidum*, y. Ju. 2f. st pc, sca: cau l in fives: brh l in fours, li, ot.
- 2 *verum*, y. Ju. 2f. 1 wr, in eights, li, en, sca: f dense pn: 1 wd-ob.
- 3 *tinctorium*, O. w. Ju. 2f. st so: cau l in five and sixes: brh l in fours.
- 4 *obtusum*, w. Ju. 2f. st so, prt: 1 in fours, ol ln, ot, rough on mr.
- 5 *asprellum*, O. w. Ju. 2f. st diffuse, brh, prickly: 1 in fives and sixes.
- 6 *brachiatum*, w. Ju. 2f. st lg, ram, his: brh sh: 1 in sixes, ln-ol, ac, g.
- 7 *apnrine*, w. J. ♂. st sca: 1 in eights, li, and li-obln, mu, his ab. 3-4 f.
- 8 *micranthum*, O. w. Ju. 2f. st brh, prickly: 1 sh, ln, m, g; mr prickly.
- 9 *triflorum*, O. w. Ju. 2f. st pc, so: 1 in fives or sixes, ln-ob, m, g.
- 10 *pilosum*, E. p. J. 2f. st si, lg, as, rt his: 1 in fours, ov, sh-m, his sides.
- 11 *circæ'zans*, O. w-y. J. 2f. st e. so: 1 in fours, ov, a so; mr n cil.
- 12 *lanceolatum*, E. p. Ju. 2f. st e, so: 1 in fours, ln, a, so, 3-n, cil mr.






- 13 *bermudianum*, p. Ju. 2f. st brh, pu: l in fours, o, ot, g, with dots.
 14 *boreale*, w. Ju. 2f. st e, so, brh: brh sh, c: l in fours, li-lu, ot, 3-n.
 15 *latifolium*, p. Ju. st e, so. l in fours, ov, a, sub-his on ur. S.
 16 *uniflorum*, p. J. 2f. st so: l in fours, li, a, revolute.
 17 *hispidulum*, w. M. 2f. st pc, pu, brh: l in fours, ln, dotted, sca.
 GAULTHERIA. 10—1. 51. Dr. Gaultier, Canada. Wintergreen.
 1 *procumbens*, O. w. J. 2f. or h. st pc: brh e. l ob, a at base: f few, no.
 2 *hispidula*, w. M. h. st crp, his: l ov, a: f sl, ax, sub-ss, 8 s, sh-bell.
 3 *shallon*, w. J. h. e. fru: l o, sub-cor: r l-sided, bt: pd 2-bt; st 3-an.
 GAU'RA. 8—1. 88. Gr. *gauros*, pinnous. Loosestrife.
 1 *biennis*, r. & y. Au. ♂. l ln, to: sk crd: fru rd-4-cornered, pu.
 2 *villosa*, r. her: st pn ab, na, g: l v, ln, a, rt to, en: pt ab, ot. 3 f.
 3 *porrifolia*, J. r. st g, pn ab: l li, hir, en: f sk: pt rd, sh claws.
 4 *angustifolia*, w. Ju. 2f. l clustered, li, re: fru ol, 4-an, a at end. S.
 5 *coccinea*, r. ☼. 2f. pu: l ln-li: sk crd: pt lg as e: stg sub-en.
 6 *mollis*, l ln, en, clothed with soft h.
 7 *linifolia*, w. st e, brh, so: l so, ss, ln-li, en; sk tm, crd: fru sh li bt.
 8 *sinuata*, brh l with c-p h; l nm, li, sin: flg sk; fru 4-sided at apex.
 GEAS'TRUM. 21—6. 1. Gr. *ge*, earth, and *aster*, star. Ground star.
 1 *quadridum*, fru-covering-glo, stalked; orifice hoary, radiating: div in four arched. 2 i.
 2 *stellatum*, volva, va spr; di eq hd, sph ss, orifice ac.
 3 *hygrometricum*, volva my-cleft: brown fru covering reticulate uniform.
 GELSEMIUM. 5—2. 48. Jasmine.
 1 *sempervirens*, y. March. 2f. st twi, so g: l op, ln, en ab, pale be.
 GENIS'TA. 16—10. 93. Lat. *genu*, a knee. Dyer's broom.
 1 *tinctoria*, y. Au. 2f. l ln, g: brh t, striate, e, unarm: le g. 1 f. E.
 GENTIANA. 5—2. 46. Gentius, king-of Illyria. Gentian.
 1 *saponaria*, O. b. w. S. 2f. st t, g: l ln-o, 3-n: f ss, fas, tm, ax.
 2 *ochroleuca*, O. y. & b. S. 2f. st sub-an, g: l ln-o: f ss, fas, tm.
 3 *rubricaulis*, st t, g, red: l ln-ol, 3-n, ot: f tm, fas, ss: co 5-cleft.
 4 *pneumonantha*, S. Au. 2f. st t: l ln-li, ot: f tm, fas: lt sl, pd.
 5 *angustifolia*, b. O. 2f. st si, 1-f: l li, wd, spr: cofun, with al di la.
 6 *linearis*, b. Au. 2f. st sub-sca: l ln-li, cil: f ss, in tm, crd fas.
 7 *quinqueflora*, O. b. Au. ♂. st 4-cornered, brh: l cls, ov, a, 3-n.
 8 *crinita*, fringed gentian. O. b. S. 2f. st t: brh lg, 1-f: l ln, a: co 4-clf.
 9 *acuta*, g y. st 4-an: l sub cls, ol, a: f fas, tm, lt; throat of co cil.
 10 *lutea*, yellow gentian. y. l br-o, n: co 5-cleft, wh, wr,
 11 *catesbaei*, Oc. l nr-ln; di of c ln-li, twice as lg as tube: co e.
 GERANIUM. 15—10. 73. Gr. *geranos*, a crane. Crow-foot.
 1 *maculatum*, O. r. & b. J. 2f. e: pu: st dic: l op, 3 or 5-par, gh.
 2 *carolinianum*, w. r. Ju. 2f. pu: l op, 5-lo: lo 3-cleft, gh: pd 2-f.
 3 *pusillum*, b. M. ☼. pd 2-f: f pen, 5 abr fi: pt re, of the lg of c.
 4 *dissectum*, r. J. ☼. h: l op, 5-par: lo 3-cleft, gh, ln: pd 2-f, lg.
 5 *robertianum*, O. r. J. ♂. hir: l op, ter, q, 3-cleft, pnt: pd 2-f: pt en.
 6 *columbinum*, b. M. 2f. pd 2-f: lg l: l 5-par: lo my-cleft, li: pt em.
 7 *caespitosum*, W. r. sub-e, brh ab: rad l ren; 5—7-cleft.
 8 *sanguineum*, 2f. pd 1-f: l 5-par, 3-cleft, or: cap brs at top. E.
 GERARDIA. 13—2. 37. John Gerarde. False foxglove.
 1 *flava*, O. y, Ju. 2f. pu: st si: l sub-ss, ln, en to: lower sub-pnt, gh.
 2 *glauco*, O. y. Ju. 2f. g: st g, pn: l pe, sin-pnt, a-ln di: up l ln, en.
 3 *pedicularia*, y. S. ♂. pu, bt-pn: l ol, gh-sr, pnt: f ax, op, pd. 2 f.

- 4 *purpurea*, p. Au. ☼. st op brh: 1 li: f ax, op, sub-ss: seg c sb. 12-18 i.
 5 *maritima*, p. Ju. ☼. 1 li, sh, ot: f pd: up seg of co cil: c tru. 6--12 i.
 6 *auriculata*, p. Au. ☼. si, rough: 1 ln-o, 2-eared at base, en: f ax, op.
 7 *tenuifolia*, p. Au. ♂. ☼? brh: 1 li, a, sca: pd ax, lg than f: te of c a.
 8 *setacea*, p. S. ☼. st brh: 1 se, g; f sca, tm ax: pd lg l. 2 f.
 9 *aphylla*, p. Ju. ☼. st na, si, sml, op, o scales: col g pd. 3 f. S.
 10 *plukenetii*, y. S. st brh. 1 se, g: f ax tm: pd sh l: teeth of c se, sh.
 11 *fasciculata*, p. S. ☼. st e, brh: 1 op in threes, sm al, sca: pd sh l.
 12 *filifolia*, p. S. st t, brh: 1 fi: sm clustered, g, al; di of c a to.
 13 *linifolia*, p. S. 2f. st t, virgate: 1 li, a, so: c tru. dt: co pu, v inside.
 14 *cuneifolia*, brh; brh e: 1 wd, ln, uneq sr; up al: pd ax, lg l: c 5-par.
 15 *fruticosa*, p. J. ♀. brh: 1 ln, sr at base, sub-pe: r tm: f op, bt.
 GE'UM. 11—13. 92. Gr. *guiō*, to be proud. Avens.
 1 *strictum*, O. y. J. 2f. hir: 1 pnt: 1 o, to: sti gh; the 5 al di of c li.
 2 *virgiuianum*, O. w. Ju. 2f. pu: rad and caul ter, up ln: sti o, sub-en.
 3 *album*, w. Ju. 2f. pu: rad l pnt: cau ter; up si, 3-cleft: lower sti gh.
 4 *rivale*, O. p. M. 2f. pu: st si: rad l pnt; cau ones 3-cleft; f no; pt lg c.
 5 *calthifolium*, y. 2f. st few-f: rad l pnt, lo a to; h: tm l lr rd-ren.
 6 *agrimonoides*, w. 2f. hir: 1 pnt; lo sub-eq, uneq gh-sr; sti o, sub-en.
 7 *peckii*, y. Ju. 2f. st few-f: rad l ren, rd, tru at base, gh-to: pe lg.
 8 *geniculatum*, 2f. my-f, sub-pn: cau l sub-ss, 3-par: sti en: pt wd-ab.
 9 *radiatum*, y. hir: radical l pnt; tm lr, ren, n, dt; st l cls, gh: awns g.
 10 *ciliatum*, y-p. Ju. 2f. pn: st si: l g, cil at mr; lower pnt, cau pnt.
 11 *anemmonoides*, Ju. 2f. g: st l-f: 1 pnt; 1 wd, to at apex: awn v.
 12 *urbanum*, 2f. f e, awns na; st e, brh, h: rad l pnt in fives; cau pal.
 up o, 1-lo; sti lr, sub-or. 12—18 i. E.
 13 *triflorum*, w. 2f. pilose: st si, sub-3-f: rad l pnt; 1 wd, gh-to. S.
 GILLE'NIA. 11—5. 92. Gr. *gelao*, to laugh. Bowman root.
 1 *trifoliata*, w. J. 2f. l ter, ln, sr, eq: sti li, en: f tm in pn: c bl-tubular.
 2 *stipulacea*, w. J. 2f. l ter, ln, gh-sr, eq: sti l, en: f tm in loose pn.
 GLAU'CIIUM. 12—1. 62. Gr. *glaucos*, sea green. Horn poppy.
 1 *luteum*, y. Ju. ☼. st g: cau l cls, re: pd l-f: siliq sca.
 GLAUX. 5—1. 35. Gr. *glaux*, glaucous color. Milk-wort.
 1 *maritima*, r. Ju. 2f. l-ol, so: f ax, ss. 4—5 i.
 GLE'CHOMA. 13—1. 42. Gr. *glukus*, sweet. Gill over ground.
 1 *hedracea*, b. & r. M. 2f. l ren, cre: st ro. Var. l cor.
 GLEDITS'CHIA. 20—6. 93. Dr. J. G. Gleditsch, a German. Honey-locust.
 1 *triacanthos*, w. J. ♀. pk brh: 1 ov, ol: le lg, cp.
 2 *brachycarpa*, O. Ju. ♀. sp thick, sh, sub-ter: 1 ol, ot: le sh-ol. S.
 3 *monosperma*, O. Ju. ♀. brh sin sp: 1 o-ol, a, le ov, m, 1-seed.
 GLYCE'RIA. 3—2. 10. Gr. *glukus*, sweet. Waterfescue.
 1 *fluitans*, Ju. 2f. pn one-si, brh: sk li-t, 8—12-f; f ot, 7-n: 1 lg, flat.
 2 *brevifolia*, J. 2f. pn si, el: sk li-t, 4—12-f: f a, n: 1 sh, e. 18 i.
 GLY'CINE. 16—10. 93. Gr. *glukus*, sweet.
 1 *striata*, st twi: 1 ol, d: r lg of l: le hir. S.
 2 *angulata*, st an, an h: 1 ol-o, silky be: le li, cp, hir.
 GLYCYRRHI'ZA. 16—10. 93. Gr. *glukus*, sweet, and *riza*, root. Li-
 quorice.
 1 *lepidota*, w. Ju. 2f. l ol, a, v: le r, ol, his. 3—5 f.
 2 *officinalis*, 2f. l pnt, tm pe: cy. E.
 GNAPHA'LIIUM. 17—2. 55. Gr. *gnaphalon*, cotton. Life everlasting.

- 1 *margarita'ceum*, O. y. & w. Ju. 2f. 1 li-ln, nr, a; st brh ab: cmb fs.
 - 2 *polyceph'alum*, O. y-w. Ju. ☼. 1 ln-li, a, g ab, d be; st pn, d: cmb tm.
 - 3 *decurrens*, O. y-w. Ju. ☼. 1 ln, br at base, a, de, sca ab, tom be.
 - 4 *plantagin'cum*, O. w. Ap. 2f. pc: st si: rad l spt, o, ob, n: cmb cp.
 - 5 *purpureum*, p. Ju. 2f. 1 li-spt, d be: st e, si: f ss, glin, tm, ax. 6--12 i.
 - 6 *uliginosum*, O. w. Ju. ☼. st brh, spr: 1 ln-li, nr at ends, d. f tm. 4-6 i.
 - 7 *germanicum*, y-w. Ju. ☼. st e, dic: 1 ln-li-a, tom: f in glo head, tm.
 - 8 *americanum*, y-w. J. ☼. her, e, brh: 1 ob-spt, pu be: fax, tm, glin sk.
 - 9 *sylvaticum*, Ju. 2f. st e, si, d: f in l sk, ax and tm: 1 li-li, d. 12 i.
 - 10 *alpinum*, 2f. st si: rad l ln: f tin, ss: inner scale of c el, a. 4 i.
- GOMPHRE'NA. 5—1. 30. Gromphena, Pliny's name. Bachelor's button.
- 1 *globosa*, r. Au. ☼. st e: 1 la-o: hd sl: pd 2-l. E.
- GO'NOLO'BUS. 18—5. 47. Gr. *gonia*, angle, and *lobos*, a pod. False choak dog.
- 1 *obliquus* p. Ju. 2f. st hir: 1 hr-o, a: cmb ax: seg of co, ac.
 - 2 *hirsutus*, p. Ju. 2f. pe hir: 1 ac, pu on sides: di of co ov-ol, ot.
 - 3 *macrophyllus*, y. Ju. 1 br, cor, ac: foilicles m: lo di. S.
 - 4 *prostratus*, p. st prt, her: 1 ren cor, a, tom be.
 - 5 *viridiflorus*, g. so, twi: 1 sub-ren-cor at base, ac, lg-pd: di of co ol-li.
- GOODYE'RA. 18—1. 21. John Goodyer. Adder violet.
- 1 *pubescens*, O. y-w. Ju. 2f. 1 rad, o, pe, ve cl: scp she; scp and f pu.
 - 1 *repens*, w. Ju. 2f. rad l o, pe: scp she: scp f pu: f one sided: lip ln.
- GORDO'NIA. 15—12. 70. James Gordon. Lolly bay.
- 1 *lasianthus*, Ju. w. h. 1 ln-ol, g, cr, f g, pd. S.
 - 2 *pubescens*, w. M. h. 1 wd-ln, pu be: cap sph.
- GOSSY'PIUM. 15—13. 74. Egyptian gottipium. Cotton.
- 1 *herbaceum*, Au. ♂. 1 5-lo, m, gld be: st her, so. 5 f. E.
- GRATI'OLA. 2—1. 37. Lat. *gratia*, grace. Hedge hyssop.
- 1 *caroliniensis*, w. Ju. 2f. st so, sm brh, pc at base, 4-sided ab, t below.
 - 2 *virginica*, w. & y. 2f. st pu, brh at base, t: 1 so, ss, ln, ot, dt ab.
 - 3 *aur'ca*, O. y. Ju. 2f. so: st 4-an, crp base, brh: 1 ss, ln-ol, pte, dt en.
 - 4 *anagalloidea*, w-b. Ju. 2f. sub-e, so: st 4-sided: 1 ol-ov; dt, sh f.
 - 5 *viscosa*, w-p. Ap. 2f. st, viscid-pu, t: 1 so, ss, ln-o, a dt, 3-n. S.
 - 6 *quadridentata*, w. Ju. ☼. so: st t, pc, sm viscous: 1 ss, ln, a, pte.
 - 7 *pilosa*, w. Ju. ☼. e, brh, h: st 4-sided: 1 ss, o, dt: c uneq.
 - 8 *missouriana*, y. J. 2f. e, t, si; 1 nr, ln, op, to at apex; pd lg l.
- GRIM'MIA. 21—2. 4. Grimm, a German botanist.
- 1 *apocarpa*, st ram, l o-ac carinate, na at apex: cps ol, striate; sub-ss.
 - 2 *michauxii*, caules: 1 ln, tm in cap, rg point, pe tin, cps sh, o, so.
- GYMNOCLA'DUS. 20—10. 93. Gr. *gymnos*, naked, and *kladas*, branch.
- 1 *canadensis*, w. J. h. 1 bipnt; l o, ac, pu. S.
- GYMNOPO'GON. 3—2. 10. Gr. *gymnos*, naked, and *pogon*, beard.
- 1 *racemosum*, Au. 2f. sk pn: f sl, rt; exterior valve of co awned at smt.
- GYMNOSTY'LES. 17—4. 55. Gr. *gymnos*, naked, and *stulos*, style.
- 1 *stolonifera*, E. M. 2f. her, pc, scrp, g: 1 pnt: f ss at root. S.
- GYRO'MIA. 6—3. 12. Gr. *gyros*, a whorl. Ind. cucumber.
- 1 *virginica*, O. y. g. 2f. 1 wr near middle of st, 3 in wr at top, ln-ov, ac.
- GYROPHORA. 21—2. 4. Gr. *gyros*, a circle, and *sphero*, spherical.
- 1 *pustulata*, fr papulose, green, pitted be, so: na, pal, tawney rec flat: mr disk sub-eq: papillose. 2 i.
 - 2 *papulosa*, fr rg, papulose, rec thick together: disk uniform, con glom.
 - 3 *vella*, fr so: un side, fi hir uniform, cl tawney: rec ss, flat mr, folds concentric.

- HABENARIA.** 18—1. 21. Lat. *habena*, a thong. Orchis.
- 1 *ciliaris*, O. y. Ju. 2f. lip ln-ol, pnt cil, twice lg as pt. 1—2 f.
 - 2 *blephariglottis*, w. J. 2f. lip ln, cil, lg of up pt. spur lg gm. 18 i.
 - 3 *cristata*, y. J. 2f. lip ol, pnt cil: pt rd, 2 lt ones to: spur sh gm.
 - 4 *psychoides*, y. J. 2f. lip 3-par, di cap-my-cleft: pt ot: spur fi, as lg gm.
 - 5 *integra*, y. Ju. 2f. lip ol, en, lg than inner pt: spur lg gm, a point.
 - 6 *huronensis*, g-w. Au. 2f. lip ln, ac, en: pt sb: spur lg of lip. 1—2 f.
 - 7 *dilatata*, O. w. or g. J. 2f. spur sh gm: lip en, li, of lg of spur: bt of lg of f: st l. 1—4 f.
 - 8 *fascescens*, p-y. Ju. 2f. lip o, to at base: pt spr: spur sb, lg of gm.
 - 9 *herbiola*, y. J. 2f. lip ol, ot, to at base: 1-to: spur fi, sh gm. 1 f.
 - 10 *bracteata*, g-w. M. 2f. lip li, em, os 3-to: spur sh, sub-2-lo: bt twice as lg as f, l-like spr: ro pal. 6—10 i.
 - 11 *orbiculata*, g-w. J. 2f. lip li, en, ot: 3 up pt; up ot, 2 lt spr, oblique at base: spur lg gm: 12, rad, or, prt, g, shining. 12—18 i.
 - 12 *marcerophylla*, A. g-y. J. 2f. lip ln, en, ac: spur lg gm, t. 1 f.
 - 13 *fimbriata*, O. p. Ju. 2f. lips 3-par: di wd, cil, fringed: lt pt o, to. 2 f.
 - 14 *grandiflora*, E. p. J. lip twice as lg pt, 3-par; di wd, fringed; middle lr: lt pt fimbriate: spur as, lg gm: 1 ov ol. 2 f.
 - 15 *incisa*, w-p. Ju. 2f. lip 3-par; di wd, gh-to, middle em: lt pt ot. 2-4 f.
 - 16 *fissa*, p. Ju. 2f. lip 3-par; di wd, to, one 2-lo: spur fi, clavate, as.
 - 17 *quinqueseta*, w. S. lip 3-par; lt seg se: inner pt 2-par; lower seg se, twice lg as pt; spur twice lg as gm. 1 ln-ov: bt ac. 2 f. S.
 - 18 *repens*, y-g. Au. 2f. lip 3-par; lt seg se: inner pt 2-par; lower seg se, lg outer pt: horn lg as gm: 1 nr-ln: bt a.
- HALESIA.** 15—12. 71. Dr. S. Hales. Snow-drop tree.
- 1 *tetraptera*, O. w. Ap. h. 1 ln-ov, ac: co 4-cleft: f: fru eq 4-wi. S.
 - 2 *diptera*, w. Ap. h. 1 ln-ov o, ac, sr: pt 4: f octan: fru cp, 2 lr wi.
 - 3 *parviflora*, h. fru uneq 4-wi, clavate, sml: f sml.
- HAMAMELIS.** 4—2. 78. Gr. *ama*, accompanying, and *mēlea*, apple. Witch hazle.
- 1 *virginica*, O. y. Oc. h. 1 ob, a, to, cor, sml sinus. 5—15 f.
 - 2 *macrophyllu*, h. 1 rd, cor, ot to: sca pt be. S.
- HAMILTONIA.** 20—5. 25. Dr. Hamilton, an American. Oil-nut.
- 1 *oleifera*, A. g-y. J. h. pu: 1 ol, en, ac: f intm r. F sml. 4—6 f.
- HEDEOMA.** 13—1. 42. Gr. *edcos*, eatable. Penny royal.
- 1 *pulegioides*, O. b. J. ☼. pu: 1 ol sr: pd ax, wr. 6—8 i.
 - 2 *glabra*, r-p. Au. 2f. so: st brh: rad 1 ov; cau ol-li, en: f ax. 6—12 i.
 - 3 *hispida*, Ju. ☼. brh, pu: 1 li, a both ends, en, ve, at mr. 3—6 i. S.
 - 4 *bracteolata*, pu: st si: 1 li, ln, a each end, en: pd 3—5-f: bt se.
- HEDERA.** 5—1. 58. *Hedus*; a kid. Iva.
- 1 *helix*, g-w. S. h. 13 or 5-lo; f ones o: u e. E.
- HEDYOTIS.** 4—1. 57. Gr. *edus*, sweet, and *ous* (*otos*) the ear.
- 1 *glomerata*, w-g. M. ☼. st: 1 ln, pu, at base: f fas, ax tm.
 - 2 *lanceolata*, g: st e 4-sided, an sm wi: 1 ss, ln, a; sti ln: cmb trichot, tm: co fun, s ex. S.
- HEDYSARUM.** 16—10. 93. *ēdus*, sweet, *aroma*, fragrance. Bush trefoil.
- 1 *canadense*, O. r. Ju. 2f. e, so: 1 ter, ln-ol: sti fi: f r: bt ln-o, ac, cil: jt of loment ot trian, his. 3 f.
 - 2 *canescens*, r-b. Au. 2f. e, pilose: st an, cil, his: 1 ter, rd, cp h be: sti o, ac: r pn: bt cor: jt of loment trian, his.

- 3 *marilandicum*, p. Ju. 2f. e, brh, pilose: l ter, ol, v be: sti sb: r pn: loment 3-jt; rh, h.
- 4 *ciliare*, O. p. Au. 2f. e, sub-pu: l ter, o, sb-pe, pu be, mr cil: sti fi: pn tm: jt of loment 2 or 3 half or, his, re. Var. l lg, g, sub-gl be. 2 f.
- 5 *viridiflorum*, g. p. J. 2f. e: l ter, o, ol, sca up soft-v be: pn ter, lg, na: jt of loment trian. 3—4 f.
- 6 *aikini*, g. p. Au. 2f. e, brh, pu: l ter, o-ol deltoid, a-m, sca be: sti cuspidate: r pn, bt. 3 f.
- 7 *obtusum*, p. & g. Au. 2f. e, sub-pu: l ter, o, ot, sub-cor at base: sti sb: pn tm: jt or, his. 1—2 f.
- 8 *humifusum*, p. Au. 2f. st prt, sub-g: l ter; l o or ov, a, h: r el: jt loment rh, his.
- 9 *rotundifolium*, O. p. Au. 2f. prt, hir: l ter, or, pilose both sides: sti rd-cor, rx: rax, tm pn few-f: jt loment rh, sca. 2—3 f.
- 10 *paniculatum*, E. p. Ju. 2f. e: l ter, ln-li, so, mr: sti sb: pn tm: loment his; jt trian. 2—3 f.
- 11 *strictum*, O. p. Ju. 2f. e, g, si: l li, net-vc: sti sb: r ax tm: loment 2-jt; jt trian, his. 2—3 f.
- 12 *laccigatum*, p. Au. 2f. so: st si, e, gl: l ter, lg-pe; l o, a.
- 13 *nudiflorum*, p. Ju. 2f. l ter, br-ov, ac, sub-gl be: scp pn, g, rad, st: jt of loment rd-trian. 1—2 f.
- 14 *glutinosum*, O. p. Ju. 2f. e, si: l lg-pe, ter, rd-o, ac: pn scp side of st: pd li: jt of loment ol-trian, g.
- 15 *acuminatum*, O. p. Ju. 2f. e, si, pu, l at summit: l ter, o, lg-ac, h both sides, cp, lg-pe; odd l rd-rh: pn lg-pd, tm. 1—2 f.
- 16 *bracteosum*, r. Au. 2f. e, g: l t, ol-ov, ac: sti sb: i tm, with se f: bt o, ac, striate, g: jt of loment sub-ov. 3—5 f.
- 17 *alpinum*, Var. A. p. 2f. c: l pnt; l ov-ol, h: sti she: jt loment rd.
- 18 *glabellum*, p. Ju. 2f. e, g: l ter, o-ot, sub-gl be, sti sml, sb: pn tm: jt of loment rhomb-trian. 2 f.
- 19 *pauciflorum*, w. 2f. dec: st fi: l ter, lg-pe; l br-o, ac, pu-cil; tm one br-rh: stios: r tm, pd, sh than l, few-f.
- 20 *lineatum*, 2f. st crp, striped green: l ter, rd, sub-ss: r lg, sml se f: jt of loment lenticular. S.
- 21 *rigidum*, p. Au. 2f. e, brh: l ol-o, ot, pu: pn brh: bt ln-o, ac. 3 f.
- 22 *rhombifolium*, p. S. 2f. pu: l ter, rh, ot, thick, reticulate, rg: pn com: bt sml: loment 1—3 jt; jt rd, vc. 2—3 f.
- 23 *scaberrimum*, p. Ju. 2f. e, sca: l ter, o, ta apex, a, pilose be: sti o, ac: pn tm: jt of loment sm trian, his. 3—4 f.
- HELENIUM. 17—2. 55. Helen, wife of Menelaus. False sunflower.
- 1 *autumnale*, y. Au. 2f. l ln, sr, sub-de: st cmb ab: disk f 5-cleft. 3—5 f.
- 2 *canaliculatum*, l ln, sr, sub-de: st si: disk f 5-cleft.
- 3 *quadridentatum*, O. Ju. 2f. l br-de; lower sub-pnt; up ln. 3—4 f.
- HELIANTHUS. 17—3. 55. Gr. *ēlion*, the sun, and *anthos*, flower.
- 1 *atrorubens*, y. & p. Au. 2f. his: st na ab, lax-pn: l spt, o, cre, 3-n, sca ab. scales of c ln-o, lg of disk. 3—4 f.
- 2 *divaricatus*, y. Au. 2f. st g, brh: l op, ss, ln-o, 3-n, sca ab. 5—6 f.
- 3 *frondosus*, y. Ju. 2f. st so be: l ln-o, rt a sr, sca ab, 3-n. 4—5 f.
- 4 *trachelifolius*, y. Au. 2f. l sh-pe, ln-o, sr, ac, 3-n, sca ab, h be: scales of c ln, a, cil, pu, sprat tips: rays nm. 2—4 f.
- 5 *hispidulus*, y. S. 2f. st sca: l ss, ln-o, ta summit, sr, sca ab. 3—4 f.
- 6 *angustifolius*, y. & p. O. 2f. st sca: l nr-ln, rev at mr, en, gl be. 3—5 f.

- 7 *mollis*, y. Ju. 2f. st so be, sca ab: l ln-o, a, sr, sca ab, pu be. 3—6 f.
 8 *strumosus* y. 2f. l o, ac, sr 3-n, sca be: scales of c ln-li, cil at base.
 9 *altissimus*, y. Au. 2f. l al, ln-o, sr, sca, 3-n, cil pe. 4—8 f.
 10 *giganteus*, y. S. 2f. l ln, sca, al, 3-n, sub-ss, cil at base. 5—6 f.
 11 *decapetalus*, O. y. Au. 2f. l o, ac, rt sr, 3-n, sca, pu be: scales c ln, eq, cil: rays 10 or 12. 3—4 f. Wild sunflower.
 12 *multiflorus*, S. 2f. l 3-n, sca: lower cor; up o: rays my-f: scales c ln.
 13 *macrophyllus*, y. Au. 2f. l o, ac, 3-n, uneq-sr, sca ab, pu be: scales of c lg-li, spr, cil at base: ch pu ab.
 14 *petiolaris*, y. p. Au. l al, o, a, en, lg-pe, sca: st e, brh: flg-pd.
 15 *tuberosus*, y. S. 2f. l 3-n, sca; h-o; up o; ac: pe cil. 4—8 i. E.
 16 *annuus*, y. & w. Ju. 2f. l all cor, 3-n: pd thicken: f no. 6—10 f.
 17 *pubescens*, y. Au. 2f. pu: st v: l ss, hr-o, cls, 3-n, cre, soft: scales c ln, v. 2—3 f. S.
 18 *longifolius*, O. y. S. 2f. g: st pn: brh few-f, tru: l sub-ss, lg-ln, 3-n, en; sr: scales of c o, a: outer li. 4—7 f.
 19 *squarrosifolius*, y. & p. Au. 2f. st sca: brh sub-g: l o, a to his. 4—5 f.
 20 *truncatus*, y. S. 2f. st g: l o, sr, ta apex, h, sca, ss. 2 f.
 21 *tenuifolius*, y. S. 2f. st so: l ln-o, ac, sr, sca both sides, lg pe. 4 f.
 22 *spatulatus*, y. S. 2f. st sca ab: l spt-o, sub-ac, sr, sca ab, pu be: brh op: scales c ln, his: ch ac, en. 4—6 f.
 23 *tricuspis*, y. S. 2f. l ol, ln-o, sca sides: scales c br-sb, cil. 3—4 f.
 24 *diversifolius*, y. S. 2f. st sca: l ln-o, ac; up hr-o, m; sca ab. 3—5 f.
 25 *scaber'rimus*, y. S. 2f. l ln, sca both sides, en: scales of c o. 4—6 f.
 26 *tubaeformis*,  l cor, wd at base, v, 3-n: pd hollow.
 27 *lactiflorus*, 2f. l op, o-ol, 3-n, sr: pd el: scales c ln, e, cil: rays my-f.
 28 *pauciflorus*, y. l ln-li, ac, sr, so: st na. 4—5 f.
 29 *tomento'sus*, y. S. 2f. st rg: l ln-o, ta summit, a, al: scales c l. 4—6 f.
 30 *aristatus*, y. S. st e, rg: un l op, ss, ln ov, a, to. 2—3 f.
 HELIOP'SIS. 17—2. 55. Gr. *ēlion*, the sun, and *opsis* face. Ox-eye.
 1 *laevis*, O. Ju. 2f. st g: l op, o, sr, 3-n, so be. 3—5 f.
 HELIOTRO'PIUM. 5—1. 43. Gr. *ēlion*, the sun, and *trope*, a turning.
 Turnsole.
 1 *indicum*, b. Ju.  l hr-o, a: sk sl; frubifid. 8—12 i. S.
 2 *curassavicum*, O. y. w. J.  l nr ln, g, w ve: sk conj. 6—12 i.
 3 *europaeum*, w.  l o, en, tom: sk conj.
 HELLEBO'RUS. 12—13. 61. Gr. *elcin*, to cause death, and *bora*, food.
 Hellebore.
 1 *foetidus*, st my-f, l: l rt sr, cr: co sm converging.
 HELO'NIAS. 6—3. 13. Gr. *ēlos*, a marsh. Blazing star.
 1 *latifolia*, p. M. 2f. sep l-less: sk o, crd: bt ln-li: l ln, m, n.
 2 *crythrosper'ma*, w. g. J. 2f. sep l: r ol: bt sh: l li, lg: seed o. 2 f.
 3 *angustifolia*, J. 2f. sep l: l li, sb: r si, tm: cds ol at summit. 2 f.
 4 *dioica*, w. J. 2f. sep l: r sk no: pd sb, sub-bt: flg co: pt li. 1—2 f.
 5 *dubia*, 2f. l lg nr: sep na: sk slender: f sml, ss. 2—3 f. S.
 HEMEROCAL'LIS. 6—1. 14. Gr. *ēmera*, a day, and *kallos*, beauty.
 Day lily.
 1 *flava*, y. Ju. 2f. l br-li, ke: pt flat, a; n pt undi. E.
 2 *fulva*, y. Ju 2f. l li-ln: 3 pt ot; n of pt brh, 3 f.
 HEMIANTHUS. 2—1. 47. Gr. *emisus*, half, and *anthos*, flower.
 1 *micrantha*, w. Au.  g: l ss, o, ov ot, en, n: pd sh l: c 5-cleft.

HEPATICA. 12—13. 61. Gr. *ēpar*, the liver. Liver-leaf.

1 *acutiloba*, O. w. b. Ap. 2f. 1 cor, 3 to 5-lo; lo en, a; 1 c a. 5 i.

2 *americana*, O. w. & b. Ap. 2f. 1 hr-ren, 3-lo; lo en, rd-ot: 1 c ot. 5 i.

HERACLEUM. 5—2. 60. Hercules. Cow parsnip.

1 *lanatum*, O. w. Ju. 2f. pe n l v be: 1 pe, br, rd-cor, sub-pal-lo: seed or.

2 *spodilium*, W. ♂. 1 pnt: 1 5, ol, pnt, a, dt: co uniform. S.

HERPES'TIS. 13—2. 37. Gr. *crpestes*, any thing which creeps.

1 *cuneifolia*, b. Au. 2f. g: 1 wd-ob, cre ab: pd lg l: co 5-cleft.

2 *rotundifolia*, O. b. Au. pu: 1 ov, rd, my-n: pd op lg l: co 4-cleft. S.

3 *amplexicaulis*, Au. st. 1 cor, cls, en, ot: pd sh l: co 4-cleft.

4 *broivnei*, 1 ol, en: pd lg l: st declined.

HES'PERIS. 14—2. 63. Gr. *ēspēros*, the evening. Rocket.

1 *pinnatifida*, J. ♂. 1 sr; up pnt: lg c. 1 f.

2 *matronalis*, 2f. st si, e: 1 ln-o, dt: pt em, m.

3 *tristis*, ♂. st his; brh spr: 1 ln-o; silique sab. E.

HETERAN'THERA. 3—1. 17. Gr. *eteros*, different, and *anēr*, anther.

1 *reniformis*, g-w. Ju. 2f. 1 rd-ren: spa ol, ac, 2-3-f. 4—8 i.

2 *ovalis*, b. Ju. 2f. 1 o-ol: spa ln, 1-f. S.

HEUCHE'RA. 5—2. 84. J. H. Heucher. Alum root.

1 *americana*, r. Ju. 2f. pu: sep & l rough: 1 rd-lo, ot m: pn dic: c sh, ot: pt ln lg c: s'ex. 2—3 f.

2 *pubescens*, r. y. J. 2f. pu: sep g: 1 sub-a-lo, to, g be: pd pn sh. 2 f.

3 *hispida*, p. J. 2f. his sca: sep, pe l g be: 1 his-pilose; sh, sub-re, m: pd pn few-f: c sh, sub-a: pt spt lg c: s'ex.

4 *caulescens*, w. J. 2f. or ♂. sep at base, pe pilose: 1 g ab, pilose n be.

5 *bracteata*, 2f. pu: sep r: 1 hr-or, gh-sr, to m: f bt; pt nr, lg c.

6 *accrifolia*, 2f. pe hir; 1 so, gl be, a 5-lo, uneq to—teeth m: sep so: pn el, lax-f: pt sh, s'ex.

7 *micrantha*, 2f. 1 rd, cor, a cre, sub-5-lo: pe lg, sc h base st; cau l gh.

8 *villosa*, w. J. 2f. v: 1 a lo, to: te a, s'ex.

HIBIS'CUS. 15—13. 74. Gr. *ibiskos*, mallows. Marsh mallows.

1 *moschutos*, w. & p. Au. 2f. 1 o, ac, sr, sub-3-lo, sub-5-n, d be. 4—6 f.

2 *palustris*, p. Au. 1 br ov, ot sr, snb-3-lo, 3-n, d be, ac: pd ax. 3—4 f.

3 *militaris*, w-r. Au. 2f. g: 1 3-lo, ac, sr: co cam: cps o, ac. 3—4 f.

4 *virginicus*, r. Au. 2f. d, rg: 1 ac, uneq to; cor, undi; up cor-ol, 3-lo; pd ax, tm r: f no: p uo. 2—4 f.

5 *phaniceus*, r. Ju. 2f. 1 o, ac, sr, cre, 3-cus: pd jt. 6—8 f. E.

6 *syriacus*, w. & p. Au. ♂. 1 wd-o, 3-lo, to: c 8-l, lg of inner. 5—10 f.

7 *esculentis*, y. Ju. ☼. 1 hr-5-lo, ot, to: pe lg f: c 5-l, bursting lgh. 3 f.

8 *trionum*, ☼. c my-l, inner inf: cps mem: 1 to, up 3-par. 6—18 i.

9 *grandiflorus*, O. r. Au. 2f. 1 lr, cr, trian-cor, 3-lo, tom both sides, hoary be: cps tom, sub-trun. 5—7 f. S.

10 *incanus*, y-w. S. 2f. 1 o, ac, ot sr, tom both sides: pd ax: c tom, eq.

11 *coccincus*, r. Au. 2f. g: 1 pal-5-par; di ln li, ac, rt sr at apex. 4—8 f.

12 *manihot*, y. & p. Au. 2f. 1 pal-dig, 7-par: di li: pd his: ou c 1-l.

13 *scabr*, y. & p. Au. 2f. st sca: 1 cor, an; up pal: c his. 3 f.

14 *carolinianus*, E. p. Au. 2f. 1 cor, o, ac, so both sides, sm sub-3-lo. 3-6 f.

HIERA'CIIUM. 17—1. 53. Gr. *icrax*, a hawk. Hawkweed.

1 *venosum*, O. y. Ju. 2f. sep na, cmb-pn g: 1 ln-ob h ab na be, mr cil, gld-to, ve cl c g. 1—2 f.

2 *gronovii*, O. y. Ju. 2f. sep l, na ab, cmb-pn: c pd gld-pilose: rad l ob ln, cil, pu. Var. st 1-l: pn sm fs. 2—3 f.

- 3 *paniculatum*, O. y. Ju. 2f. sm g: st e, l pn. woolly below. 2—4 f.
 4 *kalmii*, y. Au. 2f. st e, my-f, so, d ab: l sub-ss, ln, ac, to: pd ax tm, d.
 5 *marianum*, O. y. Ju. 2f. st e, v: l ov-ob, v on ke, lower sub-dt. 1—2 f.
 6 *pusillum*, y. Ju. 2f. sml v: st si, e, 1-f, sm 2-1: l rt ln, ta, a, en.
 7 *molle*, E. y. Au. 2f. st e, si, l, cmb, few-f: l ln-ol, to below; rad pe.
 8 *virgatum*, O. y. Ju. 2f. st e, si, v: l ss, ln, a, g, be, re-to at mr, en
 apex: pn sub-cmb: c pd tom. Var. l sml, sca rg. 2—3 f.
 9 *fasiculatum*, y. Au. 2f. sm g: st e, l, si, g: l ss, ol a, to; teeth el.
 10 *macrophyllum*, y. 2f. tall: st e, l, his: l cor, half-cl, o-ol, rt to, na:
 n ve pu be: pn divaricate-cmb: pd el, na, g: c g.
 11 *scabriusculum*, y. st g, e, t, l: l ln-o, ss, cls, sub-dt, sca sm in mr,
 rg ab, gl pilose be: c so.
 12 *aurantiacum*, y. 2f. scp l, his: f cmb: pd glm: l ol, a. his. E.
 13 *runcinatum*, J. hir: l rad, ov-ol, run: scp few-f, an: c gld-pilose. 1 f. S.
 Hierochlo'a. 3—2. 10. Gr. *ieros*, sacred, *chloe*, green herb. Seneca
 grass.
 1 *borealis*, 2f. pn sub-spr: pd so: f unarm: va of co cil on mr. 18 i.
 2 *alpina*, J. 2f. pn o: sk cp, lg brh: glu ln, n-less: lt f trian. 6—8 i.
 HIPPO'PHAE. 20—8. 24. Gr. *ippos*, a horse, *phaō*, to destroy. Buck-
 thorn.
 1 *canadensis*, h. l ol-o, g sc pu ab, stellate pu scaly be. 6—8 f.
 2 *argentea*, h. l o, ot, g both sides cov scales. 12—18 f.
 HIPPU'RIS. 1—1. 88. Gr. *ippos*, a horse, *oura*, tail. Mares tail.
 1 *vulgaris*, y-g. M. 2f. l li, ln-li, in 6s, 8s, 9s.
 HOL'CUS. 3—2. 10. Gr. *olkos*, with awns. Soft grass.
 1 *lanatus*, J. 2f. pn eq: f sh c: sup rc awn: ro fi. 1—2 f.
 HOLOS'TEUM. 3—3. 82. Gr. *olos*, whole, *ostcon*, a bone.
 1 *succulentum*, l elliptic: pt sm 3-cleft, sh c.
 HO'PEA. 15—12. 71. Dr. John Hope. Sweet leaf.
 1 *tinctoria*, y. Ap. h. l ln-ol, gl, pu be: f ss, ax, in clusters. S. 15—18 f.
 HOR'DEUM. 3—2. 10. Lat. for barley. Wild barley.
 1 *jubatum*, J. g. lt fab, awns of c co 6 times lg as f. 2 f.
 2 *vulgaris*, Ju. ☼. f all per, awned, in 2 e rows. E.
 3 *distichon*, J. ☼. lt f imper, awnless: seeds an im.
 4 *pusillum*, lt f s, awnless, a: 4 inner scales of c cr, dilated; all sh awn:
 sca. 4—6 i. De. S.
 HORTEN'SIA. 10—3. 58. *hortus*, a garden. Hydrangea.
 1 *speciosa*, r. J. h. l br o, sr, ac: f cmb. E.
 HOSACK'IA. 16—10. 93. Dr. David Hosack.
 1 *bicolor*, y. w. g dc: l sub-op, 7 to 9, ol or ob; sti hr-o, ot: f u: bt 1-1.
 2 *decumbens*, y. 2f. h, dc: l al, 4 or 5 wd-ov, a; sti a: f u; bt 1 to 3-1.
 3 *parriflora*, e, g: l al, 4 to 6, ob-ol, gl be; sti os: pd 1-f; bt un f 3-1.
 4 *unifoliata*, dc, hir, brh spr: l 2 or 3, sub-ss, ov, a apex and base; sti
 os: pd 1-f; bt un f 1-1, o.
 HOTTONIA. 5—1. 35. John Hotton. Water violet.
 1 *inflata*, w. J. 2f. f wr, sh-pd; co sh c: scp sh, inf between jt: l al.
 HOUSTONIA. 4—1. 46. Dr. Wm. Houston. Venus' pride.
 1 *cærulea*, O. b. & w. M. 2f. st e, se, dic: rad l spt; cau obln, op. 4—6 i.
 2 *longifolia*, p. Ju. 2f. l nr-ln, ta to each end: f cmb. 6—12 i.
 3 *purpurea*, O. p. w. Ju. 2f. st e, brh ab, pu at jt: l ss, o, ln ln-li. 4—8 i.
 4 *ciliolata*, p. rad l o, ot, nr at base, cil at mr; cau o-spt, ss: cmb tm,
 pd: pd tric: di of c ln-li: st so, brh ab.

- 5 *pubescens*, l wd, a, pu; sub-pe, ln; up sub-ov, ss: pn tric, tm.
 6 *serpyllifolia*, O. b. M. 2f. prt, ces: l spt, ot: pd tm, 1-f, lg. S.
 7 *tencella*, A. b. J. 2f. st crp, fi: l rd, a, n; pd tm, 1-f, lg.
 8 *rotundifolia*, w. Ap. 2f. crp: l o, rd, nr at base: pd ax, sl, 1-f.
 9 *patens*, p. March. ☼ sml; st spr, dic, sca an: f sl, tmax. 1—2 i.
 10 *tenuifolia*, so: st e, brh: brh sub-tric: l nr-li: emb tm, sub-fs. 6 i.
 11 *minima*, b. March. ☼? st e, si, sin sca: l op: spt-o, sub-ac, cil, sca
 both sides: f pd, sl, tm. 1—2 i.

HUDSONIA. 12—1. 80. Wm. Hudson. False heath.

- 1 *ericoides*, y. J. ½. l sb, hir; pd fi, sl. 6 i.
 2 *tomentosa*, y. Ju. hoary-tom; l o, im, sh interv st: f sub-ss: c ot.
 3 *montana*, dc, so, ces: l lg, fi-sb, im: pd tm: c bl: cps v. 3—5 i. S.
 HUMBULUS. 20—5. 98. Lat *humus*, fresh earth. Hop.

1 *lupulus*, O. g-y. Au. 2f. st twining sun: l lo.
 HYACINTHUS. 6—1. 16. Hyacinth, the favorite of Apollo. Hyacinth.

- 1 *orientalis*, r. Ap. 2f. co fun, half 6-cleft, ventricose at base. E.
 2 *muscari*, b. Ap. 2f. co o, all eq.
 3 *botryoides*, b. Ap. 2f. co glo: l cy fur.
 4 *comosus*, p. co an-cy; up f ster, lg-pd, e.
 5 *racemosus*, 2f. f o, at top ss: l lax, pnd, li carinate.

HYDNUM. 21—6. 1. Gr. *udnon*, mushroom, puff-ball.

- 1 *imbricatum*, cps fleshy, flat, scaly, not banded: process ash-color:
 stipe sh. 1 i.
 2 *coralloides*, brh white, becoming yellow: brh entangled, process 1-
 sided, sb. 1 i.

HYDRANGER. 10—2. 58. Gr. *údōr*, water, and *aggeion*, a vessel.
 Hydrangea.

- 1 *vulgaris*, w. Au. ½. l ol-o, ot at base, ac, to, g be: cym na. 5 f.
 2 *nica*, w. Ju. ½. l hr-o, ac, sr, d be: cym radiate. 6—8 f.
 3 *cordata*, Ju. 2f. l br-o, sub-cor at base, ac, to, g be: cym rad. S.
 4 *quercifolia*, w. r. Ju. ½. l ol, sin-lo, to, tom be: cym rad. 4—5 f.
 HYDRASIS. 12—13. 61. Gr. *udor*, water. Orange root.

- 1 *canadensis*, w-r. Ap. 2f. st two op l ab: l pe, em at base, pal, sr, gh:
 pd tm, sl, 1-f.

HYDROCHARIS. 20—9. 22. Gr. *udor*, water, *charis*, grace.

- 1 *spongiosa*, w. Au. 2f. l cor, re be, with vesicles at base. S.

HYDROCHLOA. 19—6. 10. Gr. *udōr* water, and *chloē*, grass.

- 1 *fluitans*, Ju. 2f. sml: st brh: l li, flat: sk sl, ax, se, 4-f: glu unawn.

HYDROCOTYLE. 5—2. 60. Gr. *udōr*, water, and *kotale*, a cavity.
 Navel wort. Penny-wort.

- 1 *umbellata*, g-w. M. 2f. l cre, base em: u pd, my-f.
 2 *americana*, O. g-w. J. 2f. g: l 2-cre: glm few-f, ss.
 3 *vulgaris*, g-w. J. 2f. l or, cre: scp sk, few-f.
 4 *ranunculoides*, J. 2f. l cor, sm 5-lo, cre-dt: u capitate, 8-10-f.
 5 *lineata*, r-w. Ju. 2f. g, crp: l ss: cu-li, trans n: u pd.
 6 *composita*, w. Ap. ro tu: st si, 2-l: l sub-ter; l my-cleft: u 3-5-f. 1 i.
 7 *repanda*, r-w. Ju. 2f, l rd-cor: pe n pilose: hd 3-f, pd. S.
 8 *ambigua*, w. rad l com st l-less, 2-3-u: u sm 3-f: pt ln.

HYDROLEA. 5—2. 44. Gr. *udor*, water, and *elaia*, oil.

- 1 *quadrivalvis*, b. Ju. 2f. sp pilose: l lg-ln: f ss, ax: cps g. S.
 2 *corymbosa*, b. & y. Ju. 2f. w sp: sub-g: l ln: c his. f tm. 2 f.
 3 *spinosa*, l ln, hir: f tm.

HYDROPELTIS. 12—13. 61. Gr. *udör*, water, and *peltē*, a shield.
Water shield.

1 *porpurca*, O. p. Au. 2f. 1 pel, ov, en: pd sl, 1-f.

HYDROPHYLUM. 5—1. 43. Gr. *udör*, water, and *phüllon*, a leaf.
Water leaf.

1 *appendiculatum*, b. M. 2f. hir: rad l sub-pnt, cau lo-an: sin of c app.

2 *virginicum*, b. J. 2f. so: 1 pnt and pnt; di ln-ov, gh-sr. 9—18 i.

3 *canadense*, p. w. Ju. 2f. hir: 1 lo-an: fas f crd.

4 *lineare*, Ap. 2f. pilose: 1 li: r el. S.

HYMENOPAPPIUS. 17—1. 55. Gr. *umēn*, a membrane, and *pappus*,
seed-down.

1 *scabiosacous*, w. Ap. 2f. 1 pnt; di li-ol, sub-dt: f cmb. 2—3 f. S.

2 *tenuifolius*, g-w. ♂. whitish: st cmb-brh: 1 sub-bipnt; di nr-li, en: f
com cmb: pd crd: c 6-l, sh f: seeds v.

HYMENOPHYLLUM. 21—1. 5. Gr. *umēn*, a membrane, and *phüllon*,
a leaf.

1 *ciliatum*, 2f. fr pnt: lower l lr; up sml, pnt; di li, ot, 2-cleft, cil, h ve.

HYOSCYAMUS. 5—1. 33. Gr. *us* (*uos*) a hog, and *kuamos*, a measure.
Henbane. Hog-bane.

1 *niger*, y. & p. Ju. ♂. 1 cls, sin: f ve, ss.

HYPERICUM. 12—5. 68. Gr. *upcricon*, in Dioscorides. John's wort.

1 *kalmianum*, y. Ju. ♀. fru brh: brh 4-cornered: 1 ln-li: cmb tm, 3-7-f:
di of c ln, ot: cps lg as c. 3—5 f.

2 *pyramidatum*, O. y. Ju. 2f. f tm: styles sh s: 1 of c o, a: ol a, g. 3-6 f.

3 *ascyroides*, 2f. or ♀. f tm: s eq s lg: 1 c ln-o: 1 ss, ol, a, g.

4 *prolificum*, y. J. ♀. brh 2-edged: 1 ln-li, ot: cmb ax tm, few-f. 1—3 f.

5 *galioides*, y. Ju. ♀. brh 4-sided: 1 li, ss, re at mr, fs: pn tm, dic: pts
eq, lg li c: style sub-ex. 2 f.

6 *perforatum*, O. y. J. 2f. e, brh: st 2-edged: 1 ol, ot, pte: pn tm. 1-3 f.

7 *corymbosum*, y. Ju. 2f. e, g, pte: st t, brh: 1 cls, ol-ov, ot: cmb tm,
dense-f: di of c ln, a. 18—24 i.

8 *parriflorum*, O. y. Ju. 2f. e; dic ram, sm 4-sided: 1 o-ol, sub-cor, ot,
n, ss: pn tm, dic-cmb: pt sh ln c. 6—12 i.

9 *canadense*, y. Ju. ☼. e, sml, few-f: st 4-sided, dic ab: 1 ss. 9—18 i.

10 *adpressum*, y. Ju. 2f. st e, 2-edged pa of l, sub-cy ro: 1 op, c ss, ln-ot,
pte; brh sub-li, crd; sml a.

11 *petiolatum*, y. Ju. 2f. 1 pe, ol-ov, rd-ot: f op, ax, sub-ss, sub-ter.

12 *angulosum*, y-r. Ju. 2f. e: st 4-sided: 1-ol, a, ss: pn tm, dic: brh al
f: c sub-cin; di ln, a, ke below, lg co: pt lt to. 2 f.

13 *virginicum*, O. p. Au. 2f. f 9 or 12 s, arranged in 3 parcels, ne be-
tween: 1 ov, ot, cls: st cp. Var. 1 hr-o, em, pd ax, el. 1—2 f.

14 *micranthum*, st t, pte: brh straight: 1 ol, ot, black-pte: f crd, tm.

15 *ellipticum*, st e, her, sub-ram ab, a 4-an: 1 ov, ot, pte: cmb sml, tm.

16 *aspathaloides*, y. ♀. brh sub-t, dic: 1 fas, li a, striate: f sl, sub-ss. S.

17 *fasciculatum*, y. Ju. ♀. brh 4-an: 1 crd, sm clust fi, li, ot, ss: pd ax,
near summit of brh, 1-3-f: c fi: style united. 1—2 f.

18 *rosmarinifolium*, O. y. Ju. ♀. st t, sm an: 1 ln-li, a, ta at base, sm r:
pn lg: pd near summit of brh, ax, 3-f. 2—4 f.

19 *ambiguum*, J. ♀. brh cp, 1 ln-li, a, m: f ax tm: 1 of c ln-li, uneq, lg
co: pt to near summit: styles 3, united. 2—4 f.

20 *amocnum*, y. Ju. ♀. brh cp: 1 ov, gl be: f ax, sub-sl: 1 of c o, a:
pt lg than s. 2 f.

- 21 *fastigiatum*, J. \bar{h} . brh sm cp: l nr ln, a: cmb tm, my-f, fs. 3 f.
 22 *nudiflorum*, y. Au. \bar{h} . brh wi: l ol-o, ot, ss, pn tm, na, com: col r c.
 23 *glaucum*, y. Ju. \bar{h} . brh t: l ol, cor, cls, ot, so, gl, cr: pn l dic: di of c o, a, lg pt: st pteq: styles united.
 24 *frondosum*, y. Ju. \bar{h} . brh 2-edged: l ov-ol, ot, m, nr at base: f tm.
 25 *densiflorum*, y. Ju. \bar{h} . brh; l ln-li, ot, nr at base: pn tm, com dic, sm l, dense-f: fsl pd: di of c sh, o: s sh pt united styles. 2 f.
 26 *pilosum*, Ju. pilose: st si: l o, a, ta at base: pn few-f.
 27 *simplex*, y. Au. \odot . e, woolly; st si, t: l ln-o, ss: pn tm few-f. 1-2 f.
 28 *acutifolium*, y. st her? brh, g: l nr-ln, a, pn my-f: cps lg ca.
 29 *tubulosum*, l ss: co tu: s ab middle.
 30 *triplinerve*, y. Au. 2f. e, sm brh: st sm 2-edged: l li spr, 3-n: f r-pn: co uneq: a c pt gld-si.
 31 *dolabriforme*, y. Ju. 2f. e, brh: st 2-edged; l ln-li, spr, ot: cmb tm, dic: c lu, uneq: pt axe-form.
 32 *sphacrocarpum*, y. 2f. c, g: l ol: pn na, dic: 1-f: styles united.
 33 *procumbens*, y. prt, g: brh few-f at summit: l li, w n, spr: di c ln-ol.
 34 *micranthum*, y. b. 2f. st t; pte; l ol, ot, pte, f crd, tm: c l en, sm l ot:
 35 *cistifolium*, 2f. st an: l o-ol, pte be, a, sm cls, mr re: f dic cmb.
 36 *virgatum*, 2f. st quadran: l ln-o, ols, pte, mr rev: pn few-f, dic: c ln, en: styles 2 or 3; stg capitate.
 37 *hedyotifolium*, 2f. st 4-an: l ss, ln, sub-a, cp; pte be: c ln-li, pte.
 38 *rostratum*, 2f. st woody; 2-edged: l ss, o, a at ends, at mr re, pt. cmb ax tm: c 2 bt: gm 5-styles.

HYPNUM. 21—2. 4. Gr. *upnon*, moss.

- 1 *sylvaticum*, brh di, l im, cp, spr at apex: ln-o, en: w-n lid sb.
 2 *denticulatum*, st si, l im, cp, spr at apex: ln-o, en: n-less, lid conic.
 3 *riparium*, st ram spr: l ln-o, ac, sr l-n, spr: lid sb incurved.
 HYPOPEL'TIS. 21—1. 5. Gr. *upo*, under, and *peltic*, a shield.
 1 *obtus*, Ju. 2f. fr 2-pnt, l ol, ot, up united bases; to cre. 4—5 i.
 HYPOPHYTHYS. 10—1. 51. Gr. *upo*, under, and *pitus*, the pine. False beech-drops. Woolly birdnest.
 1 *lanuginosa*, y-w. Ju. 2f. scp sk-f: plant yel-white, woolly. 3-6 i.
 2 *europca*, y. J. 2f. scp sk-f: f scales on st g: lt f octan.
 HYPOX'IS. 6—1. 17. Gr. *upo*, under, and *oxus*, sharp. Star-grass.
 1 *erecta*, O. y. Ju. 2f. scp 2 or 3-f: l ln-li: di of co ln-ol.
 2 *filifolia*, Ap. l fi, sm an, h: scp 2-f. S.
 3 *juncea*, J. 2f. pilose: l fi, fur en: scp one-f.
 HYP'TIS. 13—1. 42. Gr. *uptios*, resupinate.
 1 *radiata*, w. Au. 2f. hd off op: pd lg as internodes. 3-4 f. S.
 2 *capitata*, w. Ju. 2f. hd f op: pd lg as internodes: bt ln, sh fru c.
 3 *spicata*, sk tm; f in hd, pd, crd; l cor-o, d sr.
 HYSSO'PUS. 13—1. 42. Gr. *ussopus*, Hebrew *ezob*. Hyssop.
 1 *neptoides*, g-y. Ju. 2f. st a 4-an, sub-alate: l o, a dt; pe so. 4-8 f.
 2 *scrophularifolius*, Ju. 2f. st ot 4-an: l hr-o, ot dt; pe cil-pu. 3-5 f.
 3 *focniculum*, b. Ju. \odot . e pu: l hr-o, to, gab, tom be: wr 6-f.
 4 *officinalis*, Ju. 2f. f wr: r: di of co 2-lo, en: l ln-li. E.
 IBE'RIS. 14—1. 63. Iberia, now Spain. Candy tuft.
 1 *umbellata*, w. J. \odot . l ln, ac; sr, up en. E.
 IC'TODES. 4—1. 7. Gr. *iktis*, a skunk. Skunk cabbage.
 1 *fatida*, O. p. Ap. 2f. st-less: l rad, hr-o, lr: f-spadix sub-glo hd.
 I'LEX. 4—4. 95. Hebrew *elou*, oak. Holly.

- 1 *opaca*, g-w. M. $\frac{1}{2}$. l o, a, spi g, flat: f sc at base.
2 *laxiflora*, J. $\frac{1}{2}$. l o, sin-to, spi, flat: pd super-ax, in young brhagg. S.
3 *cassi'nc*, J. $\frac{1}{2}$. l ln-o, sr, flat, g be: lt pd cmb-brh. 8—12 f.
4 *dako'on*, w. M. $\frac{1}{2}$. l ln-ol, en, rx at mr, v on midrib be. 4—12 f.
5 *laurifolia*, l lr, elliptic, a, en: pd el, sub-3-f.
6 *myrtifolia*, J. $\frac{1}{2}$. l ln-li, m, g: fer f sl. 6—10 f.
7 *ligustrina*, J. $\frac{1}{2}$. l ln-li, wd at base, en: fer f sl. 6—10 f.
8 *vomito'ria*, M. $\frac{1}{2}$. l ov, ot at end, cre-cr, g: ult sub-ss. 6—13 f.
9 *prinoides*, $\frac{1}{2}$. l ln-ov, a at end, sr: pd one-f; fer sl. 6—8 f.
ILLI'CIUM. 12—13. 75. Lat. *illicio*, to attract.
1 *parviflorum*, y. M. $\frac{1}{2}$. l al, ln, en, ot: pt l of c rd. 6—10 f. S.
2 *floridanum*, p. J. $\frac{1}{2}$. l ac: pt nm, ol li.
IMPA'TIENS. 5—1. 73. Lat. *in*, not, and *patior*, to suffer. Touch-me-not. Jewel weed 2. Balsam weed 3.
1 *pallida*, O. y. Ju. ☼. pd sl, 2—4 f: ne ot conic, sh pt: spur re, sh.
2 *fulva*, O. y. & r. Ju. ☼. pd sl, 2—4 f: ne a conic, lg pt: 2—4 f.
3 *balsamina*, r. & w. Au. ☼. pd 1-f l ln, up al: ne sh f. 1—3 f. E.
INDIGO'FERA. 16—10. 93. Bearing indigo. Indigo.
1 *tinctoria*, $\frac{1}{2}$. l pnt, ol, g, in four pa; r sh l: le t. E.
2 *caroliniana*, b. Au. $\frac{1}{2}$. l pnt; l ov ob: sk lg l: le 2-seeded, ve. S.
I'NULA. 17—2. 55. Gr. *elenion*, tears of Helen. Elecampane.
1 *hele'nium*, y. Au. $\frac{1}{2}$. l els, o, rg, tom be: scales of c o. 3—5 f.
IONI'DIUM. 5—1. 80. Gr. *ion*, violet, and *eidos*, like.
1 *concolor*, w-g. M. $\frac{1}{2}$. e; l br-ln, sub-en: sti sb, en: pd sh: pt em. 20 i.
IPOME'A. 5—1. 44. Gr. *ips*, vine, and *omoios*, like. Morning glory.
1 *lacuno'sa*, w. p. J. ☼. g: l cor, ac, an at base: pd sh: co sh: cap h.
2 *nil*, Jn. ☼. hir: l cor, 3-lo: pd sh, 1—3-f: c v, lg ac.
3 *quamo'clit*, E. r. w. Au. ☼. l pnt, li: f sub-sl; co tubular.
4 *coccinea*, y-r. Ju. ☼. pu: l cor ac, sub-an: pd 5-f: c awned. S.
5 *dissecta*, Ju. $\frac{1}{2}$. $\frac{1}{2}$? st, pe, pd h: l g, 7-lo; di sin: pd 1-f: di of c ov.
6 *trichocarpa*, p. Ju. ☼. l en, cor, 3-lo, v: c cil: cap hir: pd 2-f.
7 *bona'nox*, w. Ju. ☼. g: l cor, en, an: pd 1 to 3-f: c awned: co undi.
8 *tamnifolia*, b. Ju. ☼. hir: l cor, ac: fld, inv: bt li: co sh; spr: cap g.
9 *ciliosa*, g: l cor, sub-cil at mr: pd lg, 1-f: c w bt: di br-ov, ot: c bl.
10 *orbicularis*, p. Ju. prt: l rd, em, ve, g: pd 3-f: tube of co sh.
11 *carolina*, b. l dg; l pe: pd 1-f.
IRE'SINE. 20—5. 30. Gr. *eiros*, wool.
1 *celosioides*, ☼. l pte, sca; lower ol, ac; up ln-o: pn brh, crd. S.
I'RIS. 3—1. 13. Gr. *iris*, the rainbow. Blue flag: flower-de-luce.
1 *versic'olor*, O. b. J. $\frac{1}{2}$. l sab: st a 1-side: cap ol, 3-sided ot an. 2—3 f.
2 *prismatica*, b. y. J. $\frac{1}{2}$. f b-less: l li: strd, my-f: gm trian. 1—2 f.
3 *lacustris*, b. $\frac{1}{2}$. b-less: l sh: sep sh l, 1-f: pt sub-eq? cap 3-side.
4 *sambucina*, b. p. w. M. $\frac{1}{2}$. st my-f: di of co em; outer flat. E.
5 *pumila*, b. M. $\frac{1}{2}$. b: sep 1-f: l ensi, g: tube of co ex: pt ol ot. 6—10 i.
6 *ochroleu'ca*, y. M. b-less: l ensiform, striate: sep sub-t: gm 6-corn'd.
7 *cristata*, b. y. Ap. $\frac{1}{2}$. b: sep 1-f, lg as l: gm 3-an: pteq. 2—4 i. S.
8 *tripe'tata*, b. M. $\frac{1}{2}$. b-less: st t, lg l: l ensi: in pt 3-to; middle to ac.
9 *cuprea*, O. r-y. Ju. $\frac{1}{2}$. b-less: st t, fl, eq: l br-ensiform: stg li, sh. 3 f.
10 *verna*, b. M. $\frac{1}{2}$. b-less, st, one-f: l lg, gl: tube lg: pt eq: cap rd. ss.
11 *sibirica*, b. Ju. $\frac{1}{2}$. b-less; st hollow, t, sm 3-f: l li: cap sh-3-an.
ISAN'THUS. 13—1. 42. Gr. *isos*, equal, and *anthos*. False pennyroyal.
1 *ceruleus*, O. b. Ju. $\frac{1}{2}$. viscid-h: l ln-ov, a both ends, 3-n: pd 1 or 2 f.

- ISA'TIS. 14—1. 63. Gr. *isazō*, to equal. Woad.
 1 *tinctoria*, J. ♂. rad l cre; cau sagittate, ol. E.
 ISNAR'DA. 4—1. 88. Danti d' Isnard. Water purslane.
 1 *palustris*, O. g. J. 2f. prt, crp: 1 op, ln, ta at base: cap ol.
 2 *alata*, Ju. g: 1 wd ln, de, st wi: cap cubic, ss. 2 f. S.
 3 *microcarpa*, Au. ☼? st de, wi: 1 al, spt-ob: fax, ss. 1 f.
 4 *sphaerocarpa*, Au. 2f. st e, brh: 1 ln-li: cps sml, ss, glo, pu. 2 f.
 5 *cylindrica*, Au. 2f. st e, brh, an: 1 ln: cps cy.
 6 *lanceolata*, Ju. 2f. st virgate: 1 ur, ln, g, sub-de: cps cubic, ss, wi.
 ISOE'TES. 21—1. 5. Gr. *isos*, equal, and *etos*, year. Quill-wort.
 1 *lacustris*, 2f. fr im at base,, nr, sb above, flat: ro fib. From 2 to 12 i.
 I'TEA. 5—1. 84. Gr. *itea*, willow, from, *icnai*, to grow.
 1 *virginica*, w. J. ♀. 1 al, tn, ac, pu on ve. 3—6 f.
 I'VA. 17—4. 55. Smell of ancient Iva. High—W. shrub.
 1 *frutescens*, g. Au. ♀. 1 ln, pte-sca, sr: glm off glo, sm shrubby. 3—4 f.
 2 *imbricata*, Au. ♀. shrubby, g: 1 ln-li, wd, en, g: c im. S.
 3 *zanthifolia*, Au. ☼. 1 op, pe, hr-o, ac, 2-sr, v, hoary be: sk na, pn.
 4 *axillaris*, y-g. M. 2f. her, sub-pilose, 1 op, ln-li, en: fax, sl, no: 6—8 i.
 5 *ciliata*, Ju. ☼. her: 1 ln-o, sub-sr: sk sm crd: bt ln, ac: 2 f.
 IX'IA. 3—1. 34. Gr. *ichō*, to fix. Blackberry lily.
 1 *chincsis*, y. r. J. 2f. co 6-pt: st fl: 1 ensiform. E.
 2 *coclestina*, O. b. M. 2f. 1 li-sb, my sh 1-f sca. S.
 JASMI'NUM. 2—1. 34. Arabian, *ysman* Jasmine.
 4 *fruticans*, y. ♀. 1 al, ter. si: 1, wd, ot: brh an. E.
 2 *officinale*, w. ♀. 1 pnt, op: 1 ac.
 JA'TROPHA. 19—15. 96. Gr. *iatron*, a remedy, and *phago*, to eat.
 1 *stimulosa*, w. Ju. 2f. his, prick: 1 pal-lo: lo ot, sub-sin-to. 6—18 i. S.
 JEFFERSO'NIA. 8—1. 62. Thomas Jefferson. Twin-leaf.
 1 *diphylla*, w. M. 2f. st-less: pd na, 1-f: 1 in pa.
 JU'GLANS. 19—12. 94. Jovisglans, the acorn of Jupiter. Butter-nut. Walnut 2. Madera nut 3. Black walnut 1.
 1 *nigra*, O. M. ♀. 1 nm, ln-o, sr: sub-cor, nr ab: pe un side of 1 sub-pu.
 2 *cinea*, O. M. ♀. 1 nm, ln, sr, rd at base, soft-pu be: pe v: fru ol-o.
 3 *regia*, M. ♀. 19, ov, g, sub-sr, sub-eq: fru glo: V. has 9 or 10 l. E.
 JUNCUS. 6—1. 13. Lat. *jungo*, to join. Rush. Bulrush.
 1 *effusus*, J. 2f. sca striate, pn brh: spr: 1 of c ln, ac, ob, ot cap. 2—3 f.
 2 *setaceus*, 2f. sca fi: u l, com, few-f: pd my-f: 1 of c sb. 2 f.
 3 *acutus*, O. 2f. sca na, t: pn lt; inv 2-l, spi: cap rd, in 2 lg c. 2—3 f.
 4 *squarrosus*, 2f. 1 se, pn tm, el, com: cps el.
 5 *tennis*, Ju. 2f. st e, fi, sm dic at summit, t: 1 se: f sl, ap, sub-ss: 1 f.
 6 *nodosus*, Ju. 2f. st sm l: hd 2, glo; 1-lt pd; ss: 1 of c m. 8—10 i.
 7 *marginatus*, Au. 2f. 1 flat, so: cmb tm, si: hd 5—10-f: trian: 12—18 i.
 8 *trifidus*, A. Ju. 2f. she cil; at base of st l-less: bt l. lg: hd 3-f, tm. 6 i.
 9 *bulbosus*, Au. 2f. st si, l, cp: 1 li-se: pn tm, com, sub sh inv.
 10 *bufonius*, Ju. ☼. st dic ab, pn: 1 fi-se: f sub-sl, ss, 1-sided. 3—6 i.
 11 *acuminatus*, Au. 2f. st l, e: 1 t, nodose: pn tm, com: hd 3—6 f. 18 i.
 12 *polyccephalus*, F. Au. 2f. st l, e: 1 cp, nodose: pn dec. 18—24 i.
 13 *subverticillatus*, 4 2f. cau l sb: pn cmb: hd 5-f, fas-wr. 18 i.
 14 *militaris*, 1 one jt, cy, lg st: pn tm: hd 5-f: 1 of c a. 2—3 f.
 15 *conglomeratus*, Ju. 2f. st na, straight: pn lt, cap re: f trian.
 16 *repens*, J. 2f. crp: st brh: 1 li, flat: fas lt tm: f trian. 6—10 i. S.
 17 *biflorus*, J. 2f. st t: 1 li, flat: pn dec, lg: fas 2-f: 3 f.

JUNGERMANNIA. 21—3. 3. Jungermann, a German botanist.

1 *platyphylla*, st prt, bipnt: 1 2-ranked im rd ot sti, en, in 3. 3 i.

2 *complanata*, st brh, crp, 1 rd, en: ears sub-o, flat.

JUNIP'ERUS. 20—15. 100. Lat. *juvenis*, young, and *pario*, to bring forth. Cedar—Juniper; 1.

1 *communis*, M. h. 1 in 3, spr, m, lg ber; brh prt.

2 *virginiana*, O. M. h. 1 in threes: adnate bases: im, old, spr. 15—50 f.

3 *sabina*, M. h. 1 op, ot, gld in middle, im 4-ways, young op, a.

4 *excelsa*, M. h. 1 op, ot, gld in middle, im 4-ways; young a, in 3. S.

5 *barbadensis*, E. h. 1 all im four ways; younger o; older a.

JUSSIE'A. 10—1. 88. B. Jussieu.

1 *grandiflora*, y. Ju. 2f. crp: st e, as: 1 ln, en, pd and c v. 2—3 f. S.

2 *crecta*, y. Au. 2f. e, g: 1 ln: f octan, ss.

3 *subacaulis*, y. J. 2f. crp, g: 1 ln-li, re-to: f sl, octan, pd: al fi sh.

4 *leptocarpa*, y. e: st and c sm hir: 1 ln: f ss: cps cy.

5 *tenuifolia*, 1 ss, li, g: f ss, octan.

JUSTI'CIA. 2—1. 36. James Justice. Malabar nut.

1 *pedunculosa*, Ju. h. sk ax: f crd: pd el, al: 1 ln.

2 *adhatoda*, p. h. 1 ln-o: brt o, n: co con. E.

3 *humilis*, Ju. 2f. sk ax and tm, few-f: f distant: bt li: 1 ln-ol. S.

4 *brachiata*, O. r. Ju. 2f. pd ax in wr r. pe in pa: brt ob, 3-f: 1 o, a.

KAL'MIA. 10—1. 50. Dr. Kalm. Laurel.

1 *latifolia*, w. & r. Ju. h. 1 lg. pe, sc, in threes, ov, so both sides. 3—20 f

2 *angustifolia*, O. J. h. 1 in threes, pe, ol, ot, sm rusty be. 2—3 f.

3 *glauca*, r. M. h. brh 2-edged: 1 op, sub-ss, ol so, gl be, mr rev. 18—24 i.

4 *cuneata*, w. r. h. 1 sc, ss, wd, ol, pu be, awned at apex: cmb lt. S.

5 *hirsuta*, r. Ju. h. brh, 1 and c hir: 1 op and al, sub-ss, ln: pd ax. 10—18 i.

KO'CHIA. 5—2. 29. Koch.

1 *dentata*, J. e. 1 ln, sin-to: st e, brh. S.

2 *dioica*, e. low: brh ax: 1 ss, en, ln-o, a, gl. 6—12 i.

KOELE'RIA. 3—2. 10. Kohler.

1 *pennsylvanica*, J. 2f. 1 flat, the she soft-pu: pn ol, loose: c 2-f. 2 f.

2 *truncata*, J. 2f. 1 flat, so: pn ol, r; c 2-f, abr floret, uneq. 2 f.

3 *nitida*, e. sk el, lo; lo crd, apx: sk ol-o, so, awnless; low 2f. 8 i. S.

4 *paniculata*, pn ol, so: sk 2—3-f, shining; glu awnless: va of c uneq.

5 *cristata*, Ju. 2f. sk sm lax: sk diverg, 3—4-f, sm awned, sub cil on ke.

KRAME'RIA. 4—1. 93. Kramer, father and son.

1 *lanceolata*, y. h. hoary-pu: 1 ln, a, v, 2 lg l.

KRI'GIA. 17—1. 53. David Krieg. Dwarf dandelion.

1 *virginica*, y. M. e. sml: 1 ly gl, so, cil: sep 1-f. el after f. 4—8 i.

2 *amplexicaulis*, y. Ju. 2f. gl: rad 1 spt, ln ov, to: sep sm 1 brh. 12—14 i.

3 *caroliniana*, Ap. y. 2f. 1 run, g: sep lg, base of c gld-h. 6—12 i. S.

4 *dandelion*, y. 2f. g: gl: 1 ln-li, en, so: sep 1-f. 8—18 i.

5 *montana*, g, pre: 1 ln, en: sep 1-f.

KUHN'IA. 17—1. 55. Adam Kuhn. False boneset.

1 *eupatorioides*, w. Au. 2f. g: 1 pe, br-ln, sr: cmb tm, few-f. 2—3 f.

2 *critonia*, y. Au. 2f. pu: 1 nr-ln, 2-to below, pe, pte be: up li en. 3 f.

3 *glutinosa*, w. S. pu: 1 ln, ta summit, to, crd: f cmb-pn. 2 f.

KYLLIN'GA. 3—1. 9. Peter Kylling. False bogrush.

1 *monocoph'ala*, 2f. culm fi, 3-sided, 1 base: hd glo, ss: inv 3-i, lg.

2 *pumila*, J. 2f. hd glo, ss, sl; inv sh, culm se: f dian. 3—6 i. S.

3 *maculata*, Ju. 2f. c 1-l, im: c 2-valved; va uneq. 3—5 f.

LACTU'CA. 17—1. 53. Lat. *lac*, milk. Lettuce.

- 1 *elongata*, O. y. J. ♂. or 2f. l so be, lower run, en, cls. 3-6 f.
 - 2 *hirsuta*, y. Au. 2f. lower st l h: rad l ly; seg tru, sub-den; up run-pnt.
 - 3 *integrifolia*, y. Ju. ♂. l en, unarm, cls, pale be, midrib so. 3-4 f.
 - 4 *sanguinea*, r. Au. ♂? l cls, gl be, run, midrib fi: f pn. 2-3 f.
 - 5 *sativa*, y. Ju. ☼. l rd; cau cor: st cmb. Var. *romana*, has ol l, nr at base. Var. *crispa*, has sin-cre l, to; rad l on keel. E.
 - 6 *graminifolia*, p. Ju. st e, si: l unarmed, undi, si at base, lg-li. 3 f. S.
 - 7 *sagittifolia*, E. y? Au. st e, g: l ln-ol, a, en, g, pale be, c-ss.
- LA'NIUM. 13—1. 42. Lat. *lamium*, froin, Gr. *lasmos*, throat. Dead nettle.

- 1 *amplexicaule*, O. p. M. ☼. fl-l ss, cls, ot rad l pe, sub-or. 6-10 i.
 - 2 *purpureum*, p. ☼. l cor, ot, to, pe, crd at top: st na down.
 - 3 *garganivum*, 2f. l cor, con: co, tube sh. E.
 - 4 *hispidulum*, w. st his: l lg-pe, brd-cor, pu: ax l-f. S.
- LANTA'NA. 13—2. 41. Lat. *lentus*, flexible.
- 1 *camara*, y. Au. ♀. l op, ln-o, cre sr, sca: st rough, not prick. S.
- LA'THYRUS. 16—10. 93. Gr. *lathuros*, leguminous. Sweet and everlasting pea.

- 1 *palustris*, w-p. Ju. 2f. st wi: sti ln: l 6, ln-li, a: pd 3-f.
- 2 *myrtifolius*, r. Ju. 2f. st na, wi, 4-cornered: sti saggitate, pd 4 or 5-f.
- 3 *venosus*, p. Ju. 2f. st na, 4-cornered: sti o, ac l nm, sm ot, m, 5-40 f.
- 4 *maritimus*, p. Ju. 2f. st com, 4-an: sti saggitate: l nm, sub-al ob, 7-f.
- 5 *albidus*, y-w. J. 2f. st 4-an, sm wi, gl: sti lr, ln-o, a, ac. 12-18 i.
- 6 *odoratus*, J. ☼. pd 2-f: 2 o-ol l: le hir. E.
- 7 *latifolius*, Au. 2f. pd my-f: tendril with 2-ln-o l.
- 8 *elymenum*, ☼. pd 2-f: tendril my ln l: sti to.
- 9 *articulatus*, Ju. ☼. pd 1-f: tendril my al ln l: le jt.
- 10 *sativus*, ☼. pd 1-f: tendrils with 2-4 l; le o, cp, with nr wi back.
- 11 *pusillus*, p. M. pd lg, 1-f: sti falcate, tendrils 2-l, si: l ln-li: st wi. S.
- 12 *decaphyllus*, p. 2f. st 4-an: stili, l in 5-pa; l ov-ol, m: 3-4 f.

LAU'RUS. 9—1. 27. Lat. *laurus*, green. Camphor 4. Sassafras 3. Spice bush 2.

- 1 *carolinensis*, y. J. ♀. l ln, cr, gl be: pd si, tm with few-f fas. 10-30 f.
- 2 *benzo'in*, O. g. y. Ap. ♀. l wd-ob, sub-pu be: f in u. 4-10 f.
- 3 *sassafras*, O. y. M. l en and lo on same plant: f die. 10-40 f.
- 4 *camphora*, ♀. l 3-n, ln-o: pn spr. E.
- 5 *catesbyana*, w. M. ♀. ln-o, l brh g: pn sh pd: di of co ot. 6-9 f. S.
- 6 *aestivalis*, l ve, ol, ac. rg be: brh su ax.
- 7 *melissaeifolia*, y. Ap. ♀. l lr-ln, ve, pu be: f in u: buds pd v. 2-3 f.
- 8 *geniculata*, y. Ap. ♀. brh fl: l sml, ov, so: u tm, few-f. 10-15 f.
- 9 *albida*, ♀. buds and younger brh so gl: l en or lo, so, os ve be: pe lg.

LAVAN'DULA. 13—1. 42. Lat. *lavo*, to wash. Lavender.

1 *spica*, Au. 2f. l ss, ln-li, mr rev: sk na. E.

LAVATE'RA. 15—13. 74. Lavater's; gay and tree mallows, 1 and 2.

- 1 *thuringiaca*. 2f. lower l an; up 3-lo, middle lo lg: pd sl. E.
- 2 *aborea*, S. ♂. l 7-an: pd crd.

LECHE'A. 3—3. 80. John Leche. Pin-weed.

- 1 *major*, g-p. 2f. e, hir: l ln-ol, m: pn l; brh f tops: f in fas r. 1-2 f.
- 2 *minor*, g-p. Ju. 2f. so: l ln-li, a: pn l: brh el, f on all parts. 8 i.
- 3 *racemulosa*, Ju. 2f. pu c-p: l li, a, cil: pn brh, na: f sml, al, pd: st e.
- 4 *thymifolia*, Ju. 2f. d c-p on all sides: l li, a: pn el, l: brh sh: f lt tm.

- 5 *tenuifolia*, J. 2f. sm pilose: l nr: pn divaricate: pedicels el: st e.
 LECON'TIA.* 19—12. 7. Maj. Le Conte. Poison arum.
 1 *virginica*, O. g. J. 2f. st-less: l has, hr, a; lo ot: spa el. 12—18 i.
 LECANORA. 21—5. 2. Gr. *lccane*, a dish or bowl.
 1 *subfusca*, crust cr, so, uneq, white or gray mr, tu en, cre. 2 i.
 2 *albella*, crust thin, leprous, polished, rec ss: white, uneven border.
 3 *atra*, crust gran, grayish-white: disk of rec: black mr, free, cre. 1½ i.
 LE'DUM. 10—1. 50. Lat. *ledo*, to hurt. Marsh tea.
 1 *palustre*, w. M. ½. l li, mr rev; d be: s 10, longer co.
 2 *latifolium*, w. r. J. ½. l li-ol. at mr rev, d be: s 5, eq co.
 LEER'SIA. 3—2. 10. John Daniel Leers. Cut grass.
 1 *virginica*, Ju. 2f. pn si; brh: f monan, cil on keel. 3—4 f.
 2 *orizoides*, Au. 2f. pn diffuse, she base: f trian, spr: ke of glu cil. 3—5 f.
 3 *lenticularis*, Ju. 2f. pn e: flr, rd, dian, im; keel n cil. 2—4 f.
 LEI'OPHYLLUM. 10—1. 50. Gr. *leios*, smooth, and *phyllon*, leaf.
 Sand myrtle.
 1 *buxifolium*, w. ½. l sml, ln-ov, en, g, revolute at mr: cmb tm. 6—18 i.
 LEM'NA. 19—2. 7. Gr. *lcnima*, shell. Duck meat.
 1 *trisulca*, O. 2f. 1 thin, ln-ov, cau one end, sr at other: ro sl.
 2 *minor*, O. J. 2f. 1 o, cp: ro sl. Var l elliptic, flat: ro sl.
 3 *gibba*, 2f. 1 ob, flat ab, hem be: ro sl.
 4 *polyrrhiza*, Ju. 2f. 1 id ob, cp: ro nm, fas.
 LEON'TODON. 17—1. 53. Gr. *leōn* (*lcōntos*) lion, and *ōdous*, tooth.
 Dandelion.
 1 *tarax'acum*, O. y. Ap. 2f. outer c rx: scp l-f: l run, to di.
 2 *palustre*, 2f. outer c scales sh, e, o: l sin-to, sm g.
 LEONU'RUS. 13—1. 42. Gr. *leōn*, lion, and *oura*, tail. Motherwort.
 1 *cardi'acu*, w-r. Ju. 2f. l 3-lo, to, bases wd: c prickly, less co. 2—3 f. E.
 2 *marrubias'trum*, r. Au. l ln-o, to: c sm prickly, lg co. 2—4 f.
 LEPID'IUM. 14—1. 63. Gr. *lepis*, a scale. Peppergrass.
 1 *virginicum*, O. w. J. ♂. rad l pnt; cau ln-li, sm gh-sr: f 4-pt, two s:
 sil lens-form. 12—18 i.
 2 *sati'vum*, w. Ju. 2f. 1 ol, my-cleft. E.
 LEPTAN'DRA. 2—1. 37. Gr. *leptos*, slender, and *anēr* (*andros*) stamen.
 Culver's physic.
 1 *virginica*, O. w. Au. 2f. sk tm, lg; l wr: st e. 3—8 f.
 LEP'TOPO'DA. 17—3. 55. Gr. *leptos*, slender, and *pous* (*podos*) foot.
 1 *fimbriata*, y. Ap. 2f. st pu, striate: l al, ln-li, half-cls, g, pte. 2 f. S.
 2 *decurrens*, y. Ap. 2f. st g: l ln-li, to, g, de: ch of egret torn. 12—18 i.
 LEPTU'RUS. 3—2. 10. Gr. *leptos*, slender, and *oura*, tail.
 1 *paniculatus*, J. 2f. rac com, a trian; brh fl: sk sb cp, one-sided. 10 i.
 LEPU'ROPE'TALON. 5—3. 84. Gr. *lepuron*, rind or peel, and *petalon*,
 a petal.
 1 *spathulatum*, w. Ap. 2f. g: st e prt, sm suc; sub-an: l al, ss. 1—2 i. S.
 LESPEDEZA. 16—10. 93. Lespedez. Bush clover.
 1 *capitata*, O. w-p. J. 2f. l ter, ln-ol, ot, be: sti sb: r ax, o, sh than l;
 le h, sh c. 3—6 f.
 2 *angustifolia*, w-p. S. 2f. l ol, ov ln, hoary-pu be: r capitata, lg l. 3—5 f.
 3 *stuei*, p. S. e, si: d: l ov: sk pd, lg l: le na, pu. 2—3 f.

*Rensselaeria, Beck. A forced name beneath the character to whom it was dedicated, or rather transferred

- 4 *polystachia*, w-r. Ju. 2f. e, brh, v: l rd-ov: sk ax, lg-pd. 2—4 f.
 5 *sessiliflora*, O. p. Ju. 2f. e: l ol: fas off ss, nm: le na, a. 1—3 f.
 6 *violacca*, O. p. Ju. 2f. l ov, ot: r u, lg as pe: fin pa: le rh, g. 1—2 f.
 7 *procumbens*, p. y. Ju. 2f. prt, pu: l ov: pd lg: f se sk: le na: c minute.
 8 *divergens*, p. Ju. 2f. brh: l ol, ot, cp, h be: r lg pe: f in pa: le o, so. 1—2 f.
 9 *repens*, p. Au. 2f. l rd-ov, em: r ax: le re to: st crp.
 10 *prostrata*, 2f. prt, g: pes m sh; l ov ot; m, h be: r ax, set f, lg l: c sh co: le o, sub-pu.
 11 *longifolia*, 2f. st e, an, pu: pe sh: l ol, g ab, cp be: r fas-emb. S.
 12 *frutescens*, 2f. e, v: pe sh; l ov, ot, sub-ni, h be: r ss, sh l: c sh co.
 13 *villosa*, 2f. e, brh, d: pe sub-el: l ov, ot: sk ax, 3 or 4 lg l: c sh co.
 LEU'CAS. 13—1. 42. Gr. *leukos*, white.
 1 *martinicensis*, l en: wr my-fcap. S.
 LEWIS'IA. 12—1. 86. Gen Merriwether Lewis.
 1 *rediviva*, w. Ju. 2f. l rad, li, sm fleshy, ob: scp 1-2-f: cps ol. S.
 LIA'TRIS. 17—1. 55. Gr. *liazo*, to come forth.
 1 *squarrosa*, r. Au. 2f. st si, h; l lg-li, n: mr little sca: r l few-f. 2—3 f.
 2 *scariosa*, b. Au. 2f. st si, sub-pu: l ln, ta, g, sca mr: c r, al: scales spt.
 3 *spicata*, r. Au. 2f. st si, tall: l li, g, cil at base, n, pte: sk lg: f ss: scales c li-ol, ot, cp. 2—4 f.
 4 *pilosa*, p. S. 2f. st si, pu: l li, pilose, cil: hd r, lax: scales of c ol ot: pd bt. Var. st striate: l lg-li: lower ln-li, pte, a, cil near base. 2—3 f.
 5 *cilindracea*, p. Au. 2f. hir: sk few-f: c sub-ss, cy, few-f. 1—2 f.
 6 *pycnostachya*, O. S. 2f. st si, hir: l nr-li, pu: sk lg: ss: c appressed squarrose at summit. 2—4 f. S.
 7 *graminifolia*, p. S. 2f. st si, g: l lg-li, g, n, mr sub-sca. 2—4 f.
 8 *heterophylla*, S. 2f. st si, g: l ln, g, so; up ln-li, sml: hd sk, sh pd.
 9 *aspera*, O. S. 2f. st sm brh, sca-pu: l ln-li, rough: hd sh, sk, al, sl.
 10 *gracilis*, p. S. 2f. st h, l li g, cil at base: hd r, 7-f. 2—3 f.
 11 *tenuifolia*, p. S. st g: lower l crd, li, h at base; up se: r lg: pd l: scales c ol, m. 2—4 f.
 12 *resinosa*, p. g: l li. crd: hd sk, ol, 4-5-f: scales of c ot. 2 f.
 13 *secunda*, p. S. 2f. st pu: l li, g, cil at base: r l-sided. 2—3 f.
 14 *sphaeroides*, p. S. 2f. l so; lower br, ln; up nr: f r, lr, sl, al. 2—4 f.
 15 *elegans*, O. p-r. Oc. 2f. st si, v: l ln-li, sub-sca be: r cy; f crd. 3—5 f.
 16 *pauciflora*, 2f. st si, g: l li: pn virgate, l; brh sh, few-f: c ss, 3-5-f: scales e, ln, a, g.
 17 *paniculata*, p. S. 2f. st si, h-viscid: l ln, n, sub-g: pn. 1—2 f.
 18 *odoratissima*, p. S. 2f. g: st si: l o ln, n, to. 3—4 f.
 19 *tomentosa*, p. S. 2f. st si wd-ln l hir: emb few-f, brh few-f. 2 f.
 20 *bellidifolia*, p. 2f. sub-g: l wd-obln: emb uneq: f all sm lg-pd: scales of c ol-ov, ot. 8—12 i.
 21 *wal'teri*, p. S. 2f. st si, h: l ln, a, g, pte, ta at base: c my-f. 2 f.
 22 *oppositifolia*, 2f? pu: l ln, op, n: st brh emb-pn: c cy o, sml.
 23 *fruticosa*, p. h. g: st; brh emb: l wd-ob, pte: c sub-5-f; di ac.
 LIGUS'TICUM. 5—2. 60. Gr. *ligustikon*, Liguria.
 1 *scoticum*, w. Ju. 2f. cau l biter: up tri; lt l uneq tm rh: u e: inv li. 12 i.
 2 *actaeifolium*, Ju. 2f. l biter: l ov, eq to: par inv se: fru ol-ov. 3 f.
 3 *levisticum*, w. 2f. l lg, nm; l ab gh. E.
 LIGUS'TRUM. 2—1. 34. Lat. *ligo*, to bind.
 1 *vulgarc*, w. J. h. l ln, a: pn com.

LIL' IUM. 6—1. 14. Gr. *leirion*, lily.

1 *philadelphicum*, O. r. y. J. 2f. 1 wr, ln-li: co e, bl, spr: pt ln. 1—3 f.

2 *canadense*, O. y. r. Ju. 2f. 1 rt wr, ln: pd tm, el, in threes. 2—3 f.

3 *superbum*, y. p. Ju. 2f. 1 ln-li, 3-n, g: lower wr; up sc. 3—6 f.

4 *catesbaei*, y. r. J. 2f. 1 sc, ln-li: st 1-f co e: pt lg claws. 1—2 f.

5 *pennsylvanicum*, J. r. y. Ju. 2f. 1 sc, ln-li: up wr, eq f: st 1-f.

6 *candidum*, w. J. 2f. 1 ln, sc, ta base: co bl, g within. E.

7 *bulbiferum*, y. J. 2f. 1 sc, 3-n: co cm, e, sca inside.

8 *pudicum*, y. 2f. 1 sc, ln-li: st 1 f: co bl, no: pt e, ss, spt-ob, ot, flat. S.

9 *umbellatum*, r. Ju. 2f. 1 sc, li, sh. a: up wr: f 1-5, tm, e; pt ln, spr.

10 *carolinianum*, y. r. Au. 2f. 1 wr sc, wd ln: f few, 1-3, tm. 2 f.

LIM' NETIS. 3—1. 10. Gr. *limnes*, a pool or marsh.

1 *eynosuroides*, Au. 2f. sk nm, 10-40, pd, pn, spr: 1 br, flat, c sh awn on glu: style 2-cleft at summit. 4—9 f.

2 *junccea*, Ju. 2f. 1 2-ranked, spr, sk few, pd: pd so: co ot. 18 i.

3 *glabra*, Au. 2f. 1 e: sk al, ss, e: co so on ke: style cleft. 3—5 f.

LIMOSEL' LA. 13—2. 37. Lat. *limus*, slime or mud.

1 *subulata*, b-w. Au. 2f. 1 li, nr, dilated apex: sep 1-f, lg as l. 1 i.

LINDER' NIA. 2—1. 37. Francis Balthazar Von Lindern.

1 *attenuata*, b. Au. ☼. 1 ln ob, nr at base: pd sh l, e.

2 *dilatata*, b. Au. ☼. 1 dilated base, cls, rt to: pd lg l.

3 *monticola*, 2f. st dic: rad 1 spt; cau li, sml rt: pd lg. 4—6 i.

4 *grandiflora*, 2f. 1 rd, en, n-lss, half-cls: pd lg, ax tm: st crp. S.

5 *refracta*, b. J. 2f. st e, brh, g: rad 1 spt-ov; up sb: f sl, ax tm. 8—12 i.

LIN' NAEA. 4—1. 58. Linneus, the great Swedish Botanist.

1 *borcalis*, w-r. J. 2f. st prt: brh e, 2-f: 1 rd cre.

Li' NUM. 5—5. 82. Gr. *linon*, flax, from *linco*, to hold.

1 *virginianum*, O. y. Ju. ☼. 1 of c a: pn tm: f rt al: 1 ln-li, sc. 1—2 f.

2 *percn'ne*, b. Ju. 2f. di of c o, ac: pt wd, rd at apex: 1 sc, ln-li, m.

3 *rig'idum*, y. di of c o, ac, 3-n, cil: pt ol, nr: 1 e, li, sh. 6 i.

4 *usitatissimum*, b. Ju. ☼. 1 of c o, a, 3-n: pt cre: 1 ln, al; st sub-sl. E.

LIQUIDAM' BAR. 19—13. 99. Lat. *liquidum*, fluid, and *umbar*, fragrant.

1 *sty'raciflu'a*, M. 5. 1 pal, ac lo, sr, v at ve be.

Li' RIODEN' DRON. 12—13. 75. Gr. *leirion*, lily, and *dendron*, tree.

1 *tu'lipife'ra*, y. r. J. 5. 1 tru at end, 2 side lo. 90—150 f.

LISIAN' THUS. 5—1. 46. Gr. *lis*, smooth, and *anthos*, flower.

1 *glaucofolius*, y. st her, t: 1 ol-o, ss, gl, a, 3-n: f tm, cmb.

LISTE' RA. 18—1. 21. Martin Lister. Lily orchis.

1 *convulluroides*, g-p. M. 2f. st with 2 rd cor, a, op l: sk few-f: lip ol, ot 2-lo: 2-lo: gm sub-glo: ro fi. 4—6 i.

2 *cordata*, g-p. M. 2f. st with op, rd-cor l: r loose: lip el, 2-to at base, bifid: seg sub-div, a. 4—8 i.

3 *pubescens*, g-w. J. 2f. 1 rad, o, a: sep 1-less, pu, lax-f: f pd: lip 2-lo. S.

Li' THOSPER' MUM. 5—1. 43. Gr. *lithos*, stone, and *sperma*, seed.

1 *arense*, O. w. M. ☼. st e, brh: 1 ln-li, a, ve, h: c lg as co. 8—15 i.

2 *officinale*, y. M. 2f. st e, brh: 1 ln, a, n, sca ab, h be: c lg tube co. 2 f.

3 *maritimum*, b. Ju. 2f. so: st prt, brh: 1 ov spt: c twice lg c.

4 *denticulatum*, p, J. 2f. st e: 1 n, sub-g, a; mr sca, to; rad ones o; cau ol: di of c dt mr. 6—12 i.

5 *latifolium*, y. Ju. 2f. seed o, pte: fru c spr, co: 1 o-ol, n.

6 *angustifolium*, w. Ju. ☼. seed o, pte: f lt: 1 li, cp: st prt. S.

7 *apulum*, O. y. Ju. ☼. m: sk tm. 1-sded: bt ln: 1 ln-li-a.

LOBE'LIA. 5—1. 52. M. de Lobel. 2 cardinal flower.

1 *dortmanna*, b. Ju. 2f. rad l li, rc, en: scp si, r, sm na: frt, pd.

2 *cardinalis*, O. r. Ju. 2f. e, si, pu: l ln-o, ac: r sm my-f: s lg co. 1—2 f.

3 *siphilitica*, b. Ju. 2f. st, si, hir, sh h: l ln-o, sub-sr: r l: c hir. 18—24 i.

4 *influta*, O. b. Jn. ♂. e, brh, hir: l o, sr: r l: cps inf. 12—18 i.

5 *kalmii*, O. b. Ju. ☼. e, sub-si: rad l spt: cau li, to: fr, al, rt, pd.
Var. sca st: pd sh f: seg of c lg cps. 6—24 i.

6 *claytoniana*, O. b. Ju. 2f. e, si, sub-pu: l ol, ot; rad en; cau dte ab;
r, bt sb. 18—24 i.

7 *puberula*, b. Ju. 2f. e, si, pu: l ol-ov, re: f sk, al, sub-ss: gm his. 2 f.

8 *aphylla*, 2f. sm l: st fi, sub-si, scaly: pd rt el. 4—6 i. S.

9 *amoe'na*, b. Ju. 2f. e, g, pu, l br-ln, sr: sk my-f, l-sided. 2—3 f.

10 *glandulosa*, b. S. 2f. st e: l ln-li, sm fleshy, dte: fr. 1—2 f.

11 *fulgens*, r. Ju. 2f. e, si, sub-pu. l lg-ln, sub-en: r my-f. 2—4 f.

12 *micauxii*, p. Ju. ☼. g, brh ab: l pc, o, cre-dte; lowest rd: r lax.

LO'LIUM. 3—2. 10. Lat. *lolium*; *loloa*, Celtic.

1 *perenne*, E. M. 2f. f lg c, unarm, li-ol, cp. 18 i.

2 *temulentum*, Ju. ☼. f sh c, lg as brs: culm sca ab. 2 f.

LONI'CE'RA. 5—1. 58. Adam Lonicer. Rough woodbine.

1 *hirsuta*, y. J. ♂. co h: fi b: l hir, ac: lower ob: up con, (o, ov, ob.)
f wr sk, lr: l cil, all h. 20—30 f.

2 *flava*, y. J. ♂. sk wr hd: co sub-ringent, di ol, ot: l o, gl be,

3 *parviflora*, O. r-y. J. ♂. sk wr hd: co ringent at base: fi b: l gl be.

4 *grata*, r. y. J. ♂. sk wr: colg tube: l ob, sub-m, net-ve paler be.

5 *sempervirens*, r. y. M. ♂. sk na wr: co sub-eq; tube ventricose ab: l o
ob, glbe; up connate-perfoliate: l peren.

6 *douglasii*, ♂. brh cli: l ov, a ends, pe g, cil, d, up connate: f hd-sk.

7 *caprifolium*, ♂. co ringent, tm: ss l per at top. E.

8 *periclymenum*, J. ♂. f in o, im, tm hd: l distinct.

9 *ciliolum*, y. J. ♂. sk wr, apx hd, sub-ss: co sub-eq: tube hir: l sm
cls, ss pe, o, gl be; mr cil; up per. S.

LUDWIG'IA. 4—1. 88. Prof. Ludwig.

1 *alternifolia*, O. y. Ju. 2f. e, brh, sub-g: l al, ln, hoary be: pd ax, 1-f:
cps 4-sided: di of c lr, cl. 1—3 f.

2 *pilosa*, y. Ju. 2f. brh, hir: l al, ol, ss, hir both sides: pd 1-f, ax. 2 f.

3 *uniflora*, st straight, si: l al, ln, a, g: f tm: pt lg c.

4 *mollis*, Au. 2f. v: st e, brh: l ln; cps glo, 2-l. S.

5 *capitata*, y. Au. 2f. st e, virgate: l ln-li, g: f in tm hd: bt lg c.

6 *pedunculosa*, y. J. 2f. st pit: l op, ln: pd 1-f, lg l. 3—6 i.

7 *linearis*, y. Au. 2f. st e, brh, an near summit: l al, li, g, sub-sr. 2 f.

8 *decurrens*, y. Au. ☼. e, brh, g: l al, ln-ov, de: f octan. 2 f.

9 *natans*, y. Ju. crp: l op, ln-spt: f ax, ss: pt lg c.

LUNA'RIA. 14—1. 63. Lat. *luna*, moon-form.

1 *annua*, p. ♂. l ot to: silicles ov, ot both ends. E.

2 *rediviva*, b-p. 2f. l m teeth: silicles ta both ends.

LUPINAS'TER. 16—10. 93. *Lupine-like*.

1 *macrocephalus*, y. p. M. 2f. 19, obln: pe lg: sti wd, gh-3-to: te of c
fi, plumose. S.

LUPI'NUS. 16—10. 93. Lat. *lupus*, a wolf.

1 *perennis*, O. b. r. y. M. 2f. st l so: l digitate, 8 to 10 l, obln, ot: fal,
c: banner em, ke en. 12—18 i.

2 *decumbens*, p. sub-de: f pd, sm wr, bt: c hir; ke en: l ln-ol.

- 3 *albus*, w. Au. ☼. c not appendaged, al: en, ke 3-to. E.
 4 *hirsutus*, b. ☼. c ap, al: banner 2-par: ke 3-to.
 5 *pilosus*, r. w. ☼. c wr: banner 2-par; ke en.
 6 *luteus*, y. ☼. c wr: banner 2-par; ke 3-to.
 7 *villosus*, w. r. p. J. 2f. v; 1 si ol: c al in lg sk: banner 2-cleft. S.
 8 *diffusus*, Ap. 2f. v: st nm, dc: 1 si, ol, ob: pe sti sh, na.
 9 *nootkatensis*, Ju. 2f. st 1 hir: 1 digitate; 17-8 ln, ot: c wr: banner em.
 10 *sericeus*, r. p. Ju. 2f. st & 1 tom: 1 digitate; 17-8, ln, a: c sm wr: banner gh: ke en.
 11 *argenteus*, y-w. Ju. 2f, 1 digitate; 15-7, ln-li, a, g ab, silk be: c al.
 12 *pusillus*, b. J. ☼ or ♂. sml: 1 dg l, wd ol, g ab: c al: banner 2-par: ke en: le 2-seeded. 4—6 i.

LUZULA. 6—1. 13. *Luzule*.

- 1 *pilosa*, O. M. 2f. 1 h: pn sub: pd 1-f, rx: 1 of c ac, sh ot cps. 6 i.
 2 *campestris*, O. M. 2f. 1 h: sk ss & pd: 1 of c ac, lg ot cps. 1 f.
 3 *melanocarpa*, Ju. culm l: 1 sub ln, so: pn cap, loose: f pd.
 4 *spicata*, Ap. 1 nr, h at throat; sk no, com: 1 of c ac-awned, lg as rd cps. 8 i.

LYCH'NIS. 10—5. 82. Gr. *lychnos*, a lamp.

- 1 *apctala*, 2f. c inf; co sh c: st 1:f.
 2 *alpina*, r. 2f. g: f in dense u hd: pt 2-cleft: styles 4.
 3 *chalconica*, r. J. 2f. f fas, level-top, or convex. E.
 4 *viscaria*, 2f. st viscous: pt en: cps 5-celled.
 5 *flos-cuculi*, 2f. pt torn; cps 1-celled, rd.

LY'CIUM. 4—1. 38. Gr. *Lukion*, Lycia.

- 1 *bar'barum*, r. y. J. ♀. stan: brh e: 1 ln, ta both ends: c 3-clef. E.
 2 *carolinianum*, p. Ju. ♀. unarm: 1 clustered, nr-wd, fleshy: f 4-cleft, tetran. 3—5 f. S.

LYCOPO'DIUM. 21—1. 5. Gr. *lukos*, wolf, and *pous* (*podos*) the foot.

- 1 *clavatum*, O. g. Ju. st crp: brh as: 1 sc, incur-brs, sr: sk in pa, pd, cy: scales o, ac, dt.
 2 *complanatum*, g-y. Ju. 2f. crp, e: brh al, dic: 1 connate, spr.
 3 *carolinianum*, Ju. 2f. st crp: 1 sm 2-rank, spr, ln: pd e, sl, el, 1-sk: bt sub-ln.
 4 *sabinaefolium*, Ju. 2f. st e, dic: 1 ln, a, pointing 4-ways: pd sl, 1-sk.
 5 *dendroideum*, g. Ju. 2f. e: brh e: 1 in six eq rows: sk sl, nm.
 6 *obscurum*, Ju. 2f. e: brh spr: 1 in 6 uneq rows: sk 1 or few, sl.
 7 *annotinum*, Ju. 2f. st crp: brh twice 2-par, spr: 1 pointing five ways, ln-li, m, spr.
 8 *inundatum*, Ju. 2f. st crp, sub-ram; brh si, sl, e, 1-sk at top: sk l.
 9 *alopceuroides*, Ju. 2f. st crp, sub-ram: brh si, lg as, 1-sk at top: 1 li-sb, cil-to at base, spr: sk l.
 10 *salaginoides*, Ju. 2f. st crp: brh si, as: 1 sc, ln, spr, cil-to: sk sl.
 11 *rupestre*, E. Ju. 2f. st crp, brh: brh sub-di, as: 1 sc, ln-li, cil, h at apex: sk sl tm.
 12 *albidulum*, Au. 2f. 1 o, a, dte, al, ep: sk tm, lg, 4-sided.
 13 *apodum*, Ju. 2f. 1 rd-o, a, flat, dte al: st brh, ro near base: sk tm.
 14 *lucidulum*, moon-fru pine. M. y. 2f. st with lg brh: 1 spr, ln-li, sr.
 15 *selago*, 1 sc, en, ln, awnless, in 8 eq rows: st dic, e, fs.
 16 *tristachyum*, Ju. 2f. st e: brh al, dic, sub-com: 1 ln, a, pointing 4-ways: pd sl, el, 3-sk: sk t: scales rd-ac. S.

LYCOP[']SIS. 5—1. 43. Gr. *lukos*, wolf, and *ops*, the eye.

1 *arvensis*, b. Ju. ☼. lis: 1 ln, re-to: r in pa: f ss.

2 *virginica*, w. J. ☼. sml lis: lower 1 spt; up li-ol, en; r sl: f pd.

LYCO[']PUS. 2—1. 42. Gr. *lukos*, wolf, and *pous*, foot.

1 *europæus*, w. Ju. 2f. lower 1 gh; up ln, sr: c ac-sp. 1—3 f.

2 *virginicus*, w. J. 2f. 1 br-ln, sr, base nr en: c sh, sp. 2 f.

3 *uniflorus*, w. J. 2f. 1 ln, sub-sr, g: sg prt: low plant, f sl.

4 *obtusifolius*, 2f. 1 ln, rt ot sr.

LYCOPER[']DON. 21—6. 1. Gr. *lukos*, wolk, *perdo*, explosion. Wolf-puff-ball.

1 *bovista*, lr obeonic, soft be: scales br indistinct, black, sph. 3 i.

2 *pratense*, white, soft, hem, sub-ss: so with sc warts. 2 i.

LYGO[']DIUM. 21—1. 5. Gr. *lugodes*, flexible.

1 *palmatum*, E. g-y. Au. 2f. st climb: 1 pal, 5-lo; di ln, ot: sk tm, com pn. 3—4 f.

LYSIMA[']CHIA. 5—1. 35. Lysimachus.

1 *stricta*, O. y. Ju. 2f. r tm, lg, lax: 1 op, in threes, ln, ss: pt ln. 1—2 f.

2 *thyrsiflora*, O. y. J. 2f. st si so: 1 ss, ln, op, a, r lt, lg pd. 12—18 i.

3 *quadrifolia*, O. y. J. 2f. pu: 1 sub-ss, ov, ac, pte, wr, in op pa, ax, 1-f pd: di of co ov, en. 12—18 i.

4 *ciliata*, O. y. J. 2f. sub-pu: 1 op, lg-pe, sub-cor-ov; pe cil. 2—4 f.

5 *hybrida*, E. y. J. 2f. g: 1 op, pe, ln, a at enps: pe cil: fno: co shc.

6 *revoluta*, y. J. 2f. so: st 4-sided, si: 1 li, ss, ta both ends; mr rev: pd sl: di c ln, a: seg rd-ov, ac. 6—18 i.

7 *quadriflora*, 2f. brh: st so: 1 ss, op, lg li: pd in 4, sub-tm, 1-f. 2—3 f.

8 *hercemon'ti*, 2f. f tm: up sc: 1 ln-o, ss, 3-n. 2 f. S.

9 *lanceolata*, 2f. g, e, si: 1 in fours, sub-pe, ln, ac: pd in fours, iny-f: up fr: di of co o, a.

10 *heterophylla*, Ju. 2f. st e, g, brh: 1 rd; up li, ss: f ax, no. 12—18 i.

11 *angustifolia*, y. 2f. g, brh: 1 op wr, lg-li, pte: r tm, sh: di of co ol.

LY[']THUUM. 11—1. 91. Gr. *luthron*, blood.

1 *salicaria*, p. Ju. 2f. pu: 1 op in threes, ss, ln, cor at base: f tm, wr-sk: cps ol: s 12. 2 f.

2 *verticillatum*, O. p. Au. 2f. pu: 1 op, or in threes, ln, pe: f ax, sm in wr: fru glo: s 10. 2 f.

3 *hysso-pifolium*, w. p. 2f. 1 al op, ln-li sub-ov: f sl, ax. 6—10 i.

4 *virgatum*, p. Ju. 2f. 1 op, ln, g: st pn: f ax, in threes, pd. s. 12. S.

5 *alatam*, O. p. Ju. 2f. g: st wi: 1 op al, ss, sub-cor, o-ol: f ax. 2—3 f.

6 *lineare*, w. Ju. 2f. g, pn: 1 li, sm op. 3—4 f.

MACBRI[']DEA. 13—1. 42. Dr. Wm. Macbride.

1 *pulchra*, p. & w. Au. 2f. st e, si: 1 op, ln, a, sr, pte, cil, g be, smh ab; up ss; lower attenuated at base as if pe. 12—18 i. S.

MACLU[']RA. 20—4. 98. Wm. Maclure.

1 *aurantiaca*, h. 1 pe, ov, ac, en, sub-m, so shining ab: pe n hir, pu be: fru ax, sub-ss. 20—30 f. S.

MACRO[']TRYs. 12—1. 61. Gr. *makros*, large, and *botrus*, raceme.

1 *racemosa*, w. Ju. 2f. 1 dec; 1 ol-o, gh-to: r in sk: cps o. 3—9 f.

2 *foetida*, Ju. 2f. 1 dec; 1 o, gh-to; te a: r pn, no: styles 5: cps o.

MAGNO[']LIA. 12—13. 75. Peter Magnol.

1 *glauca*, w. J. h. 1 ov, gl be: pt ob, ta to base.

2 *acuminata*, b-y. J. h. 1 ov, ac, pu be: ptob, ot. 70 f.

3 *tripetali*, w. J. h. 1 lr, wd-ob, a; in young state silky: pt 9, ov, a: rx. 25—35 f.

- 4 *grandiflora*, O. w. M. $\frac{1}{2}$. l ov leathery: pt br-ob, nr claw. 80 f. S.
 5 *macrophylla*, O. w. J. $\frac{1}{2}$. brh fragile: l lr, ol, sub-cu-ob, sin, gl be: pt 6 o, ot. 30—35 f.
 6 *cordata*, y. M. $\frac{1}{2}$. l br-ov or ln-o, sub-cor, sub-tom be. 20—40.
 7 *auriculata*, y-w. M. $\frac{1}{2}$. l lr, ln-ob, a, gl be, cor at base; lo apx. 30—40 f.
 8 *pyramidata*, Ap. $\frac{1}{2}$. l rh-obov, a, sub-cor at base: pt ln, a.
 MAL'ACHODEN'DRON. 5—5. 70. Gr. *malakē*, soft, and *dendron*, tree.
 1 *ovatum*, w. M. $\frac{1}{2}$. l o, a: f sl, sub-ss. 6—12 f. S.
 MALAX'IS. 18—1. 21. Gr. *malakia*, softness.
 1 *liliifolia*, w. y. p. J. $\frac{1}{2}$. l 2, ln-o ov: scp 3-cornered: pt fi, rx, 2-cl: lip ob, m. 4—8 i.
 2 *longifolia*, y-g. J. $\frac{1}{2}$. bu rd: scp 2-l: l br-ln, lg scp: sk ol. 3—7 i.
 3 *loesclii*, y. l two, ln-o: scp 3-cornered: lip o, re at apex.
 4 MAL'OPE. 15—13. 74.
 1 *malacoides*, y. \odot . l ol, ot, en, cre, g ab: pd sl, ax. 12—18 i. S.
 MAL'VA. 15—13. 74. Gr. *malakē*, soft.
 1 *americana*, y. J. \odot . l o, a, to, sca: f ax, sl, tm, hd-sk.
 2 *rotundifolia*, O. r. w. J. $\frac{1}{2}$. l hr-or, os 5-lo: pd bearing fru pnd: st prt.
 3 *munroana*, r. her, d: l rd-cor, sm 5-lo, to: inv se: pd tm pn.
 4 *revularis*, r. st her, h: l sca, cor, 5 to 7 cleft; lo a: pd tm ax, 6 to 8-f.
 5 *hederacea*, r. $\frac{1}{2}$. st sh, pre: pd ax, 1-f: pt h.
 6 *sylvestris*, r-b. J. $\frac{1}{2}$. and $\frac{1}{2}$. st e: l 7-lo, a: pd pe h. E.
 7 *crispa*, Au. \odot . st e: l an, f ax, glm.
 8 *moschata*, $\frac{1}{2}$. st e: rad l ren, gh; cau 5-par, pnt, my-cleft: l of c li.
 9 *virgata*, r. $\frac{1}{2}$. $\frac{1}{2}$. l 3-lo, to, wd at base: pd pa, lg pe.
 10 *abutiloides*, p. Ju. $\frac{1}{2}$. l 5 an lo tm: pd 2-cleft, 4-f, ax: cap my-seed. S.
 11 *caroliniana*, r. Au. \odot . l 5-lo or pal, gh-to: pd lg pe: pt en: fru v:
 12 *triloba*, $\frac{1}{2}$. l ol, ot 3-lo, to, tom: pd ax, lg pe.
 13 *coccinea*, r. Au. $\frac{1}{2}$. all over tom, h: l 3—5-cleft; di gh, a: r tm.
 14 *triangulata*, p. Ju. hir, sub-de: lower l trian-cor; up 3—5-lo. 12—18 i.
 MANIS'URIS. 3—2. 10. *manis*, lizard, and *oura*, tail.
 1 *granularis*, \odot ? c o f glo fer f: st e, brh: she hir. 2—3 f. S.
 MAPA'NIA. 3—1. 9. Gr. *mapaino*, emaciated.
 1 *sylvatica*, Ju. $\frac{1}{2}$. culm at base covered im ln l or scales. S.
 MARCHANTIA. 21—3. 3. Marchant, a French botantist.
 1 *polymorpha*, O, g-y. Ju. $\frac{1}{2}$ rec radiate s pd, fr cr; lo n, cov ve. 2 i.
 2 *hemispherica*, p rec hem, en; 4 sided: di of c ot, frsml, cre be, red ab.
 3 *conica*, p rec conic-o, an: ss, fr lg cip, sin. 2 i.
 4 *crinita*, sml: mr of fr cl cre, lo rd, p rec sub-glo, 5-lo, fi lg, mr purple.
 MARIS'EUS. 3—1. 9. Celtic *mar*, a marsh.
 2 *retrofractus*, Ju. $\frac{1}{2}$. u si; rays lg: sk ob, im: sk sb, at length re. 18 i.
 3 *echinatus*, Ju. $\frac{1}{2}$. u si; rays sh: sk glo: f spr. 6—18 i.
 4 *cylindricus*, Ju. st ot 3-an, g: u si; hd cy: sk ln, sub-cp. 2—3 f. S.
 MARRU'BIUM. 13—1. 42. Maria urbs, in Italy.
 1 *vulgare*, O. w. Ju. $\frac{1}{2}$. l rd-o, to, ve: c to, se, uncinat.
 MARSHAL'LIA. 17—I. 55. Humphrey Marshall.
 1 *lanceolata*, p. M. $\frac{1}{2}$. st si, na smmit, l below: rad l ob: cau lg-ln:
 2 *latifolia*, $\frac{1}{2}$. st si: l ln-ol, ac, 3-n; lowest she: scales of c a: ch re li.
 3 *angustifolia*, p. Ju. $\frac{1}{2}$. st brh: l nr-ln; up li: scales of c sb: ch li. 2f.
 MARTY'NIA. 13—2. 40. John Martyn.
 1 *proboscideae*. w. p. y. Ju. \odot . st brli: l al, cor, en, v. 1—2 f.
 MATRICA'RIA. 17—2. 55. Lat. *matrix*,

- 1 *chamomilla*, w. M. ☼. 1 bipnt: scales of c ot. E.
 MECONOP'SIS. 12—62. Gr. *mekōn*, a poppy, and *opsis*, appearance.
 1 *diphylla*, 2f. st with twin l near summit: 1 ss, lo pnt: pd sl. 1-f.
 2 *petiolatum*, y. J. 2f. st 4-sided: 1 br, lg, pe, pnt-lo; lo 5--7. 12—18 i. S.
 MEDICA'GO. 16—10. 93. Gr. *medikē*, Medes.
 1 *lupulina*, O. y. J. ☼. sk ov: le ren, 1-seed: sti en: 1 ob: st pc.
 2 *intertexta*, y. Au. pd sm 2-f: le ov: pk pu, se, 2-rank, ap: sti cil-to. E.
 3 *satira*, Ju. 2f. pdr: le so: sti en: 1 ol, to.
 4 *tribuloides*, ☼. pd 2-f: le cy, flat both sides, ac, coni 2-ways, rx.
 5 *scutellata*, Ju. ☼. pd 2-f: le unarin, coch or form, convex base flat top.
 ME'LAMPY'RUM. 13—2. 36. Gr. *melas*, black, and *puros*, wheat.
 1 *americanum*, O. y. Ju. ☼. lower l li, en; fln, to: f ax.
 2 *brachiatum*, st t, sub-sca, na, lg, as, op wr brh: 1 en, rg sca. 6—8 i.
 MELAN'THIUM. 6—3. 13. Gr. *melas*, black, and *anthos*, flower.
 1 *virginicum*, w. J. 2f. pn py: pt ov, sub-hastate, flat, 2 spots. 2—3 f.
 2 *hybridum*, w. J. 2f. pn r ab, p: pt rd, claws, plaited, hir. 2 f.
 3 *glaucum*, g-w. Ju. ro bu: 1 gl, mr: r si, few-f: pt rd, seed sb.
 4 *monicum*, Ju. 2f. pn with lower fs: up p, r: pt ol, flat, sh claws. S.
 ME'LANAN'THERA. 18—1. 55. Gr. *melas*, black, Lat. *anthera*, anther.
 1 *hastata*, w. S. 2f. 1 hastate, 3-lo; ch of rec ln, ac. 4—6 f. S.
 ME'LIA. 10—1. 71. Gr. *melia*, the ash.
 1 *azedarach*, ♀. 1 pnt: 1 so, o, to. S.
 MEL'ICA. 3—2. 10. Meline, name of a grass.
 1 *speciosa*, J. 2f. so; pn lose, e. few-f: brh si: fot. 3—4 f.
 2 *diffusa*, J. 2f. pn diffuse, brh: fa. b-less: st e, pu. S.
 MELILO'TUS. 16—10. 93. Gr. *meli*, honey, and *lōtos*, lotus.
 1 *ulgaris*, y. J. ☼. st e: 1 obln, m sr: banner and wi eq: r ax sub-pn.
 2 *alba*, w. J. ☼. st e: 1 ov, o, ob, obln, m sr: banner lg wi. 3—6 f.
 MELIS'SA. 13—1. 42. Gr. *melissa*, a bee.
 1 *officinalis*, w. b. Ju. 2f. f wr half around, sub-ss: bt ol, pd. E.
 MELO'THRIA. 19—16. 97. Gr. *melon*, fruit, adn *thrion*, food.
 1 *pendula*, y. J. ☼. 1 sub-ren, lo an; tm lo eq rest: ber cy, o.
 MENISPER'NUM. 20—13. 77. Gr. *mēuē*, the moon, and *sperma* seed.
 1 *canadense*, O. w-y. Ju. ♀. st cli: 1 sub-cor, rd-an, peltate.
 2 *smila'cinum*, y. Ju ♀. 1 peltate, sub-g, cor, rd, ot an, g be: rasi. S.
 3 *lyoni*, Ju. 2f. 1 cor, pal-lo, lg pe: r si: pt 6: s 12.
 MEN'THA. 13—1. 42. Menthe, daughter of Cocytus.
 1 *tenuis*, O. w. J. 2f. g: 1 ln-o, sr, pe: sk tm, sml wr: s not ex. 1—2 f.
 2 *canadensis*, w-p. Au. 2f. f wr: pe, pilose: s eq co. 12 i.
 3 *borealis*, O. w. Ju. 2f. as, pu: 1 pe, ln-ov, a both ends: f wr. 9—18 i.
 4 *viridis*, p. Au. 1 ln, ss: sk el, int: s lg. 1—2 i.
 5 *piperita*, p. Au. 2f. sk ot, int below: 1 subo, sm g, pe: st g. 1--2 f. E.
 6 *arvensis*, p. Ju. h, brh: 1 o: f wr: c bl. 1 f.
 MENTZ'LIA. 11—1. 88. Dr. Christian Mentzel.
 1 *aurea*, y. st dic: 1 ln-o, an-cre: f ss; pt ov, ac, en, cps 3-seed. 12 i. S.
 2 *oligosperma*, dc: f lr.
 MENYAN'THES. 5—1. 46. Gr. *men* or *mēne*, a mouth, *anthos*, flower.
 1 *trifoliata*, O. w. J. 2f. 1 ter: co b ab.
 MENZIE'SIA. 8—1. 50. Archibald Menzies.
 1 *cærulea*, r. Ju. ♀. 1 sc, crd, li, ot, to: pd tm; 1-f: f bl: c a, sml.
 2 *globularis*, J. ♀. 1 lu, g be n, pu: c 4-cleft: f glo, octan. 2—4 f.
 3 *enpctriformis*, r. Ju. ♀. 1 li, sr. concave be: pd tm: f bl: c ot.

- 4 *ferruginea*, J. \bar{h} . 1 ln ob, g be except n: c sm 4-cleft. S.
 MESEMBRYAN'THEMUM. 11—5. 87. Gr. *mesēmbria*, mid-day, and *an-*
thos, flower.
 1 *crystallium*, w. Au. ☼. brh: 1 al, o: f ss: c br-o, a, re. E.
 MES'PILUS. 11—5. 92. Gr. *mesos pilos*, half-bullet.
 1 *micranica*, \bar{h} . 1 ln-o, d be: f ss, sl. E.
 MICRAN'THEMUM. 2—1. 35. Gr. *mikros*, small, and *anthos*, flower.
 1 *orbiculatum*, w. Au. \bar{h} . st prt, t: 1 or, nr at base: f pd. S.
 2 *emarginatum*, w. Au. \bar{h} . 1 ov, ob, em: f ss.
 MICROPE'TALON. 10—4. 82. Gr. *mikros*, small, and *petalon*, petal.
 1 *lanecolatum*, Ju. \bar{h} . g: 1 ln, nr both ends: f pn: pt o, sh.
 2 *longifolia*, w. J. \bar{h} . st dc, or sub-dc, 1 ln-li, op, en, so. 12—18 i.
 3 *laeviginosum*, Au. \bar{h} . dense-pu: 1 ln, ta into pe: pd sl, el last ref. S.
 MICROS'TYLIS. 18—1. 21. Gr. *mikros*, small, and *stulos*, style.
 1 *ophioglossoides*, g-w. J. \bar{h} . 1 sl, o, cls: scp 5-an: lip cleft at tip. 6-9 i.
 MIE'GLIA. 3—1. 10. Jno. Rodolph and Achilles Meig.
 1 *macrosperma*, O. Ap. \bar{h} . st t, g, rigid: ln, flat, sub-ac. 3-15 f. S.
 MIKA'NIA. 17—1. 55. Prof. Jos. Mikan, of Prague.
 1 *scandens*, w. Au. \bar{h} . st so, cli: 1 cor, re-to, ac; louneq: f cmb.
 2 *pubescens*, w-p. Au. \bar{h} . pu: st cli: 1 cor, re-to, an at base; ac, c 4-f.
 MIL'IUM. 3—2. 10. Lat. *milium*, a grass.
 1 *effusum*, \bar{h} . pn com: brh, glu o, ct: co awnless, so: 1 br li. 5—8 f.
 2 *amphicarpon*, Au. \bar{h} . 1 ln-li, h, cil: pn si, bearing per f. 18—24 i.
 3 *pungens*, \bar{h} . culm e: 1 ln, sh, inv: pn cp brh in pa, 2-f. 12—18 i.
 4 *nigricans*, f pn, crd: va of c shining, black: 1 ensi, lg. E.
 MIM'ULUS. 13—2. 37. Lat. *minus*, masked actor.
 1 *virgens*, O. b. Ju. \bar{h} . e, g: 1 ss, ln, ac, sub-sr: pd ax. op, lg f. 1-2 f.
 2 *alatus*, b. Ju. \bar{h} . e, g: 1 pe, o, ac, sr: pd ax, op, sh f: st wi. 1-3 f.
 3 *luteus*, y. Ju. \bar{h} . e, g: 1 rd-o, n, to; lower ot, pe; up a, ss: r tm.
 4 *lewisii*, p. Au. \bar{h} . e, sml, pu: 1 ss, ln-ol, a, n, m-dte: f few. 6-8 i. S.
 MIRAB'ILIS. 5—1. 32. Lat. *mirabilis*, wonderful.
 1 *dichotoma*. \bar{h} . f ss, ax, e, sl. E.
 2 *jalapa*, r. y. Ju. \bar{h} . f pd: 1 g.
 3 *longiflora*, w. Au. \bar{h} . f crd, lg, no: 1 sub-v.
 MITCHEL'LA. 4—1. 57. Dr. John Mitchell.
 1 *repens*, O. w. J. \bar{h} . st crp: 1 rd, pe, op.
 MITEL'LA. 10—2. 84. Lat. *diminutive of mitra*, mitre.
 1 *diphylla*, w. Ap. \bar{h} . 1 cor, sub-lo, dt: scp 2-l: 1 op. 1—2 f.
 2 *cordifolia*, M. \bar{h} . 1 rd-ren, 2-cre, sc h ab: scp e prt, na or 1-l. 6—8 i.
 3 *grandiflora*, w. \bar{h} . hir: 1 rd-cor, ot lo, to.
 4 *pentandra*, y. \bar{h} . s 5: rad 1 pe, hr-or, lo, doubly cre; scp e, el, sk r.
 5 *prostrata*, Ju. \bar{h} . ro crp: st prt: 1 al, rd-cor, sub-a, ot sub-lo.
 MOLLU'GO. 3—3. 82. *mollugo*, *mollis*, soft.
 1 *verticillata*, O. w. Ju. ☼. st sub-di, prt: 1 in wr, wd, a: pd 1-f.
 MOLUCEL'LA. 13—1. 42. Molucca.
 1 *lavis*, w. g. Ju. ☼. c cm, 5-to: teeth eq, awnless: 1 pe, rd-o, to. E.
 MOMOR'DICA. 19—15. 97. Lat. *mordeo*, *mouordi*, to bite.
 1 *echinata*, w. Au. ☼. ber 4-seed, rd: 1 cor, 5-lo-an, ac, en: c 6-cleft.
 2 *balsamina*, S. ☼. ber an: 1 g, spr, pal. E.
 MONAR'DA. 2—1. 42. Nicholas Monardes.
 1 *didyma*, O. r. J. \bar{h} . 1 o, ac, sub-cor, sm h: fin si hd. 18—24 i.
 2 *oblongata*, b. r. Ju. \bar{h} . pu: hd si: outer bt o: c sh, b in throat. 2--3 f.

- 3 *clinopodia*, y. p. Ju. 2f. g: hd sml, si, tm: outer bt br-o, a, en, so.
 4 *fistulosa*, p. Ju. 2f. hir, sc h: hd si, l: outer bt ol, a, g: c lg, b. 2 f.
 5 *punctata*, y. J. 2f. so: f middling size, wr: bt ln, cl, lg wr. 2—3 f.
 6 *hirsuta*, b. p. Au. 2f. h: f sml, wr: bt attenuated into awns: up teeth c sh, rest bist: l o, ac, lg pe sr. 2—3 f.
 7 *beckii*, 2f. st rough, stiff h: l pe, o-ol ln, sr, a, sm h: bt o, g, ve, sh than 2-lipped c: up teeth of c sb. F sml, wr.
 8 *ciliata*, p. Au. 2f. hir: f sml, wr: bt o, g, ve, cil, eq c: l o-ol, ta, sub-ss.
 9 *rugosa*, w. Ju. 2f. so: hdsi, middling size: bt o: c so: l o, sub-cor, a, rg: n be pe: st a-an, so. 4 f.
 10 *gracilie*, y-w. g: hd lt tm, sml: outer bt li, cil: c pu-cil: co sh. S.
 11 *purpurea*, r. Ju. 2f. sm g: hd lr, l: outer bt lr, cl, br-o, ac, sr: c cl: throat b: co lg, g: l ol-o, a, sr: n all pilose; st a an, g.
 12 *bradburiana*, p. Ju. 2f. hd lr, tm: outer bt br-ln, cil, cl: c b throat, 5 sb, lg, teeth: l op, ss, sh cil pe; h both sides, ln-ol, dt, rd at base. 3 f.
 13 *scabra*, p. Au. 2f. hd si, tm, sm in 3: bt ln-o: teeth of c sh, a, straight: l ln-o, sub-cor, sr, op, sca, pte, sm h: pe sh, h. St brh. 3 f.
 MONOERA. 3—2. 10. Gr. *monos*, one, and *keras*, horn.
 1 *aromatica*, J. 2f. sk sl; sk 6-f: fawn, bat mr: exterior va of co gl. S.
 MONOTROPA. 10—1. 51. Gr. *monos*, one, and *tropō*, to turn. Bird nest.
 1 *uniflora*, O w. J 2f. st 1-f: no at first, at lg e: scales st apx. 4—8 i.
 2 *morisoniana*, J 2f. scp el, straight, 1-f: sc distant: f e. s 10—12.
 MONOTROP'IS. 10—1. 51. Like Monotropa.
 1 *odorata*, r-w. March. f bl, in aggregate hd. 3—4 i. S.
 MON'TIA. 3—3. 86. Joseph de Monti.
 1 *fontana*, l op: f ax, sml.
 Mo'RUS. 19—4. 98. Morea Greek of mulberry. Mulberry.
 1 *rubra*, h l cor, o, ac or 3-lo, eq sr, sca, soft be: p sk cy. 15—30 f.
 2 *alba*, M h l hir, base o lo, uneq sr, so. 15—20 f. E.
 3 *nigra*, Ju h l cor, o or sub-5-lo, uneq to sca.
 MUHLENBERG'IA. 3—2. 10. Rev. H. Muhlenberg. Drop-seed.
 1 *diffusa*, O J 2f. culm diffuse: dc l ln-li, pn brh. 18 i.
 MYA'GRUM. 14—1. 63. Gr *muia*, a fly, and *agra*, capture.
 1 *argenteum*, y Ap 2f. silver-d: st nm, si, an: l li-spt, en, ot: S.
 MYGIN'DA. 4—4 95. Francis Von Mygind.
 1 *myrtifolia*, w Au h l op ol, ot, sr, rx at mr, g: pd ax, sh, sub-sl.
 MYLOCA'RYUM 10---1 51. Gr *mulē*, a mill, and *karua*, a kernel. Buck-wheat tea.
 1 *ligustrinam*, w M h l al, ss, wd-ln, en, g, sub-gl be: r si, tm 6-15 f S.
 MYOSO'TIS 5---1 43. Gr *mus*, (*muos*,) mouse, and *ous*, (*ōtos*) ear. Scorpion Weed.
 1 *palustris*, b M 2f. seeds so: cl sub-ov, lg as tube of co. 12---18 i.
 2 *arvensis*, forget-me-not w-b J seeds so: c lov, ac, hir, lg tube of co: st brh: r conj: l ln-ol, hir. 4---8 i.
 3 *suffruticosa*, J b? st brh, hir: l ln-li, lis pilose: sk tm my: f pd: 8 i.
 4 *nana*, b y 2f. l ol, v: r few-f: seeds so: mr sr. S.
 MYOSU'RUS 5—13 61. Gr. *mus*, (*muos*) mouse, and *oura*, tail.
 1 *minimus*, Ap seeds l li, en: scp 1-f: s 5-8: pt anther-form 2---4 i. S.
 2 *shortii*, seeds scp sh l: ne appendage of c mem:
 MYRI'CA 20---4 99. Gr *muro*, to flow Bayberry.
 1 *gale*, M h l wd-ln, ot, sr at apex: s aments im; scales ac: 3-4 f.

- 2 *cerif'cra*, g-p. M. $\frac{1}{2}$. l wd-ln, a, distant sr at apex: s aments lax; scales a: fru sml, glo, covered with whitish wax, l ln li. 5—18 i.
- 3 *carolinensis*, Ap. $\frac{1}{2}$. l wd-ol, to: s aments lax; scales a. 3—4 f.
- 4 *pennsylvanica*, $\frac{1}{2}$. l ol, a at each end, en sub-sr at apex, revolute at mr: s aments lax; scales a: ber glo, lr. 3 f.
- MY'RIOPHYL'LUM. 20—13. 88. Gr. *murios*, innumerable, and *phūllon*, leaf. Milfoil.
- 1 *verticillatum*, Ju. $\frac{1}{2}$. l pnt, cap; up pnt: f in ax wr; lower p; up s.
- 2 *spicatum*, Ju. $\frac{1}{2}$. l all pnt, cap: sk int, na, wr: f s.
- 3 *heterophyllum*, Ju. $\frac{1}{2}$. lower l cap, pnt; up ov, a sr: f hexandrous.
- 4 *capillaceum*, Ju. $\frac{1}{2}$. l all cap-pnt: f ax, op, al, tetrandrous, per.
- 5 *ambiguum*, st floating, dic: l pe, os pnt; 3-cleft: seg se, a.
- 6 *tenellum*, Ju. $\frac{1}{2}$. e, l-less: bt en, ot: pt li, re. 4—12 i.
- 7 *scabratum*, J. $\frac{1}{2}$. l pnt. fwr, ax; up s, tetrandrous; lower p. 12 i. S.
- MYR'TUS. 11—1. 89. Gr. *muron*, perfume. Myrtle.
- 1 *communis*, w. Ju. $\frac{1}{2}$. f sl: inv 2-l: l o. E.
- NA'JAS. 19—1. 7. Gr. *nais*, a water nymph.
- 1 *canadensis*, sml, fi, so: l nr-li.
- NARCIS'SUS. 6—1. 17. Gr. *Narkissos*, a youth. Daffodil.
- 1 *pseudo-narcissus*, M. $\frac{1}{2}$. spa 1-f: ne bl, e, crisped, eq o pt. E.
- 2 *tazetta*, polyanthos. $\frac{1}{2}$. spa my-f: ne bl, tru, thrice sh as pt: pt al br.
- 3 *jonquilla*, jonquil. M. $\frac{1}{2}$. spa my-f: ne bl sh: l sb.
- 4 *poeticus*, $\frac{1}{2}$. spa 1-f: ne wh, sh, sca, cre: l inf at mr.
- NAR'DUS. 3—1. 10. Gr. *nardos*, spikenard. Mat grass.
- 1 *stricta*. $\frac{1}{2}$. sk se, straight: f one-sided. S.
- NARTHE'CIUM. 6—1. 13. Gr. *narthex*, Fennel.
- 1 *americanum*, y. Ju. $\frac{1}{2}$. r sm int sk, lax: cau bt cls pd, ch-brs below.
- NEC'TRIS. 6—2. 61. Gr. *nekton*, floating.
- 1 *aquatica*, g-y. M. $\frac{1}{2}$. submersed l op, my-par, ca; floating al. S.
- NECK'ERA. 21—2. 4. Necker, a German botanist.
- 1 *pennata*, tol 2-ranked, cp, l ln ov, ac, n-less: disk undulate cps immersed in c: lid sub-conic, to.
- 2 *cladorhizans*, crp, brh spr, 2-ranked, l im, ov, a, n-less: cps cy: lid conic ol ot.
- NELUM'BIUM 12—13. 61. Nelumbo. Sacred bean.
- 1 *luteum*, y. Ju. $\frac{1}{2}$. l peltate, or, en: co: anthers li ab.
- 2 *pentapetalum*, w. Ju. $\frac{1}{2}$. l peltate, or, en: c 5-l: pt 5. S.
- 3 *reniforme*, $\frac{1}{2}$. l ren: co polypetalous.
- 4 *codophyllum*, y. $\frac{1}{2}$. l d be. L two feet wide?
- NEMOPAN'THES. 4—4. 95. Gr. *nemos*, grove, and *pantos* (of *pas*) all. Mountain holly.
- 1 *canadensis*, g-y. M. $\frac{1}{2}$. l o, en, sr at apex, g: pd sub-sl. 3—5. f.
- NEMOPH'ILA. 5—1. 43. Gr. *nemos*, a grove, and *phileō*, to love.
- 1 *phacelioides*, b. M. ♂. succulent: st 3-sided: l al, pnt: pd lg, 1-f, op l tm, sm r; r in: fru df. S.
- NEOT'TIA. 18—1. 21. Gr. *neottios*, a bird's nest. Ladies' tresses.
- 1 *tortilis*, O. w. J. $\frac{1}{2}$. rad l li: sep she: f secund: lip sm 3-lo. 12 i.
- 2 *gracilis*, O. w. Ju. l rad, o: sep she: f in spiral row: lip ob. 8—12 i.
- 3 *cernua*, O. w. Au. $\frac{1}{2}$. l ln, 3-n: st she: sk ol, dense-f; fre-no: lip ol, en, a. Var. st sh: l ln-ol, sub-rad, flat. 8—18 i.
- NEP'ETA. 13—1. 42. Lat. *nepeta*, scorpion. Catnip.
- 1 *cataria*, O. b-w. $\frac{1}{2}$. pu: f in wr sk: l pe, cor; to sr.

NICOTIA'NA. 5—1. 38. John Nicot. Tobacco.

1 *tobacum*, w-r. Ju. ☼. 1 ln-o, ss, de; f a. E.

2 *rustica*, Au. ☼. 1 pe, o, æn: f ot.

3 *paniculata*, sml-f tobacco. Au. ☼. 1 pe, cor, en: f pn, ot, clavate.

4 *quadrivalvis*, b-w. Ju. ☼. 1 ol-o, pe: f sc, sl, near summit of brh. S.

NID'ULARIA. 21—6. 1. Lat. *nidus*, (nest.)

1 *stricta*, obconic hir, brown striate inside. 1—2 i.

2 *campanula*, cm v ash, lead cl. 1—2 i.

NIGEL'IA. 12—4. 61. Lat. *niger*, black. Fennel flower.

1 *damascena*, M. ☼. f surrounded with 1 inv. E.

2 *sativa*, nutmeg f. p 5: cps m, rd l sub-pilose, pnt. 2—15 i.

NOLI'NA. 6—3. 13. P. C. Nolin.

1 *georgiana*, w. M. 2f. 1 lg-li, cr, dry: scp with sml sb scales near base:

pn spr, r. 2—3 f. S.

NOSTOE. 21—4. 2. Gr. *nostos*, returning, God of mills.

1 *commune*, fi expanded, deformed, plaited, wavy. 2 i.

2 *pruniforme*, fr glo, watery inside, integ, cr so. ¼ i.

NU'PHAR. 12—1. 62. Gr. *nouphar*, water lily. Yellow water lily.

1 *adecna*, O. y. Ju. 2f. 1 cor; c 5-6-1: stg cre: cps fur: 1 floating in deep water e in shallow: pe semi cy.

2 *kalmiana*, Ju. 2f. 1 cor, lo near each other: c 5-1: stg gh.

3 *sagittatifolia*, Ju. 2f. 1 cor, lo near each other: c 5-1: stg en. S.

NUTTALL'IA. 15—12. 74. Thomas Nuttall.

1 *digitata*, r. M. 2f. gl: lower l os digitate, di li; seg g. 2—4 f.

NYMPHAE'IA. 12—1. 62. Gr. *numphaia*, nymphs inhabiting pure and running water. Pond lily.

1 *odorata*, O. w. Ju. 2f. 1 rd-cor, en, sub-em: lo spr asunder, ac, ot: pt eq 4-1 c. Var. pe, pd l purplish be; lo a.

2 *minor*, w. 2f. 1 cor, en; n ve be; pd pe sm h: stg 16 to 20-rayed.

NYS'SA. 20—5. 24. Nymph. Pepperidge.

1 *multiflora*, O. y-g. M. ½. 1 ob, ol, en, a both ends; pe, mr v.

2 *aquatica*, ½. 1 o-ol, en, a at both ends, g: p pd 2-f: drupe sh.

3 *capitata*, ½. 1 sh-pe, ln-ol ov, en, pu sm hoary be: s f capitate. S.

4 *tomentosa*, M. ½. 1 lg-pe, ol, ac, rt sr, tom be: p f sl: drupe ol.

5 *uniflora*, Ap. 2f. 1 lg pe, ol, ac, rt sr, g both sides: p pd 1-f: drupe ol.

OBOLA'RIA. 13—2. 46. Gr. *obolos*, Athenian corn. Penny-wort.

1 *virginica*, r. Ap. 2f. st si: 1 ol, tru, fleshy, purple be: f ax. 3—4 i.

O'CYUM. 13—1. 42. Gr. *okus*, quick. Basil.

1 *basilicum*, ☼. 1 o, g: c cil. 6—12 i. E.

ŒNAN'THE. 5—2. 60. Gr. *oine*, the vine, and *anthos*, flower. Drop-wort.

1 *longifolia*, w. Au. 2f. 1 pnt; 1 ln-li, falcate, en: u na. 3—5 f.

2 *rigidus*, w. S. 2f. st t, striate: 1 pnt, so; 1 ln-ol, en, rt teeth. 2—4 f.

3 *filiformis*, w. Au. ☼? 1 si, t, jointed, a: seed wi. S.

4 *phellandrum*, Ju. 2f. 1 divaricate. In water.

5 *digitata*, l cut-pal; seg 3, li en: fru o, ta into neck at base.

ŒNOTHE'RA. 8—1. 88. Gr. *oinos*, wine, and *thero*, to seek. Scabish.

1 *biennis*, O. y. J. ♂. st v, sca: 1 ln-o, flat, to: f sub-sk, ss. 3—5 f.

2 *muricata*, y. Ju. ♂. st purple, m: 1 ln, flat: s lg of co. 1—2 f.

3 *parviflora*, y. Ju. ♂. st so, sub-v: 1 ln-o, flat: s lg co.

4 *grandiflora*, y. Ju. ♂. st g, brh: 1 ln-o, g: s declined. 2—3 f.

5 *sinuata*, y. J. ☼. st diffused, pu: 1 ov-ol, to sin: fax, v: cps prismatic. Var. st low, si, 1-f: 1 en.

- 6 *canadensis*, st sub-g: 1 nr-ln, ss, spr-to, cil at mr: cps ol, clavate.
 7 *tetragona*, 2f. 1 ov, ot, en: f sm level-topped: cps pd, tru, 4-v.
 8 *fruticosa*, y. Ju. 2f. pu: st brh from base: 1 ln, sub-dt, a: cps pd, ol-clavate, an: r na be. Var. h :st si: 1 ln ln-o, a, sub-dt. 12—18 i.
 9 *incana*, y. st e: 1 flat, hoary tom, en, ov-o, a: r few-f, na. 6—8 i.
 10 *hybrida*, y. Au. st e, v: 1 pu both sides, ln, rt to: cps sm sk, sh-pe, o-4-an. 1—3 f.
 11 *pumila*, y. Ju. 2f. g: st as: 1 ln, ve en, ot: cps sub-ss. 12 i.
 12 *chrysantha*, y. J. 2f. st slender, pu: 1 ln, ot, flat, eu: tube of c half lg as di: cps clavate, a-an, ss. 10 i.
 13 *pusilla*, y. Ju. 2f. sub-pu: st sml, sub-si: 1 ln-ol, ot, en. 4—6 i.
 14 *glauca*, O. y. Ju. 2f. g: 1 br-ov, re-dn, so, gl: cps o-4-an, pd. S.
 15 *linearis*, y. Ju. 2f. pu: 1 li, en: cps lg-pd, rd, 4-an, v.
 16 *cacspitosa*, w. r. Ju. 2f. st-less: 1 ln, gh-to: cps ol, ss: tube of c lg.
 17 *pinnatifida*, w. J. ♂. pu: st dc: rad len; cau pnt; seg li, a. 6—24 i.
 18 *fraseri*, Ju. 2f. g: st si below, brh ab: 1 o, pe, gld-dn: r l: cps pd.
 19 *macrocarpa*, y. Au. ♂. g: st brh: 1 ln, pe, gld-dn, silky on mr n: pt obcor: cps 4-wi, sh-pd.
 20 *triloba*, y. M. ☼. 2f. st-less: 1 int pnt, to, g: pt 3-lo at apex.
 21 *speciosa*, w. J. 2f. pu: 1 ln-ol, to, sub-pnt: r na, no: cps ob, an.
 22 *linifolia*, y. J. ♂. 1 en; rad ln; cau li, crd: r na, tm: cps ob, an, pu: pt obcor, lg s: stg 4-lo.
 23 *scrulata*, y. J. 1 li, sm sp sr, a: fax: 1 of c ke: stg 4-lo: cps cy, e.
 24 *humifusa*, w. s, prt, brh, v: 1 ln-li, sub-dn en, silky-v: fax: c v: tube; lg gm: cap prismatic.
 25 *albicaulis*, w. Ju. 2f. st si, e, g, brh ab: 1 ln-li, sub-sr, sub-v be. 3 f.
 26 *riparia*, y. ♂. so: st e, brh: 1 ln-li, a, sub-dn, flat: cps sk. 2 f.
 27 *suaveolens*, y. st, c, cps, sub-pilose: 1 ln-o, os to: pt lr, em.
 28 *lamarkiana*, y. stram: 1 en, ln-o: pt en; lr: cps g, sh, sm 4-sided.
 29 *purpurca*, p. gl: 1 ln, ta to both ends, ot: tube of c sh: pt br-o, cre: s ex; stg thick: sh; cps o-3-sided; ss, h.
 30 *romanzowii*, p. sm s-gl; st dc be: 1 ln-ol, m, ta into pe: tube c sh, limb half lg as co: pt br-ob, cre, violet cl: stg ss: cps ol h, sm 4-sided.
 31 *media*, y. 2f. st e, h: 1 br ln-li, a, to, pu: tube of c lg, h: pt mr.
 32 *viscosa*, st brh, dc, t, d: 1 ss, ln, n, to-sin: fax, ss; pt obcor.
 O'LEA. 2—1. 34. Gr. *claua*, the olive. American olive.
 1 *americana*, w. M. ♂. 1 ln, en: r cp: bt all con, sml. S.
 ONOCLE'A. 21—1. 5. Gr. *onos*, vessel, *kleiō*, to shut up. Sensitive fern.
 1 *sensibilis*, J. 2f. fr pnt; fer 2-pnt: st g.
 2 *obtusiloba*, br fr pnt; fer 2-pnt: st scaly.
 ONOPOR'DON. 17—1. 54. Gr. *onos*, an ass, and *perdo*, same as in puff-ball. Cotton thistle.
 1 *acanthium*, p. Ju. ♂. scales of c spr every way, ac: 1 o-ol, to-sp. E.
 ONOSMO'DIUM. 5—1. 43. Resemblance to *Onosma*. False gromwell.
 1 *hispidum*, y-w. J. 2f. his: 1 ln-ov, a, pte; di of co sb. 1—2 f.
 2 *molle*, w. Ju. 2f. whitish-v: 1 ol-ov, sm 3-n; di of co sub-ov.
 OPHIOGLOSSUM. 21—1. 5. Gr. *ophis*, serpent and *glossa*, tongue. Ad-der tongue fern.
 1 *vulgatum*, 2f. fr o, si, ot, re: sk an inch lg, cau. 8 i.
 2 *bulbosum*, M. 2f. rō bul: fr hr o, ot: sk cau. 6 i.
 3 *pusillum*, sk cau: fr cor, a. 1 i. S.

OPHIORHI'ZA. 5—1. 46. Gr. *ophis*, serpent, and *riza*, root.

1 *mitreola*, w. Ju. ☼. 1 o, ss, with nr sca. 12—18 i. S.

2 *lanceolata*, w. p. Au. ☼. 1 lg-ln, sr, ta at base. 18 i.

OPLOTHE'CA. 15—5. 30. Gr. *oplon*, armour, and *theca*, sheath.

1 *floridana*, O. w. Ju. 2f? st e, brh ab, pu, with tumid joints. 3—4 f. S.

OR'CHIS. 18—1. 21. Greek name. Orchis.

1 *spectabilis*, O. r. M. 2f. lip ob, und, cre: pt straight; lt lg: spur clavate, sh gm: bt lg f: st l-less: 1 rad, ov, g. 3—6 i.

2 *flava*, y. Ju. 2f. lip 3-cleft, en; di lr, o, en, cre, spur fi, lg of gm: sk com: bt lg f. 1—2 f.

3 *obsoleta*, J. 2f. lip ln-ol, undi. bt sh: gm pd: scp na: spur ot, sub-inf.

4 *tridentata*, w. J. 2f. lip ln, 3-to at apex: pt ot: spur fi, as. 6—12 i.

5 *viroseus*, g. Ju. 2f. lip ln, cre: pt: bt lg f: spur sub-inf, ot. 12—18 i.

6 *hyperborea*, g-y. Ju. 2f. lip ln, lr as spr pt: spursb, sh gm: sk o.

7 *obtusata*, 2f. lip li, en, lg spur: lg as gm: 1 sl, rad, sub-wd, ot.

8 *rotundifolia*, 2f. lip 3-cleft; middle di 2-cleft: spur sh gm: 1 rd-ov.

9 *nivea*, w. lip li, ol, en: pt spr: spur fi, lg gm: lower 1 li, lg. S.

10 *viridis*, g-w. Ju. lip li, 3-to at apex: pt: spur ot, sub-inf: bt lg f. 3 i.

11 *bidentata*, lip ov-ol, 2-to at base: pt o, spr: spur sh gm: 1 nr-ln: st na. 12—18 i.

ORIG'ANUM. 13—1. 42. Gr. *oron*, s mountain, and *ganos*, joy. Mar joram.

1 *vulgare*, r. Ju. 2f. sk rd-pn, heaped: bt o, lg c. 1—2 f.

2 *marjorana*, h. sk rd, ter, com, pd: 1 pe, ov, ot, so. 6—12 i. E.

OR'NITHOGA'LUM. 6—1. 16. Gr. *ornis* (*ornithos*,) a bird, and *gala*, milk. Bethlehem star.

1 *bracteatum*, p. 2f. scp bt, 1-f, t: ln-ol, ot: fi li: 1 fi fur. 4 i.

2 *umbellatum*, 2f. f cmb, pd lr bt: fi sb: 1 li, en, em. 6—8 i. E.

OR'NUS. 2—1. 34. Lat. *ornus*, the mountain ash.

1 *americana*, M. h. 1 br-o, sr; tm one obcor.

OR'BAN'CHE. 13—2. 36. Gr. *orobos*, the vetch, and *agechein*, to strangle. Cancer root.

1 *uniflora*, O. p-w. J. 2f. scp pa, na, 1-f: co re. 3 i.

2 *americana*, p-y. Ju. 2f. st si, im ln-ov scales; sk tm, g: co rc: s ex.

3 *ludoviciana*, p. pu: st low, si: f and o a scales sub-im: c 2-bt: co rc: s so. 3—4 i. S.

4 *fasciculata*, p. Ju. st sh, si: pd nm, na, tm, lg of st: scales few. 4—5 i.

OR'ROBUS. 16—10. 93. Gr. *orō*, to excite, and *bous*, an ox. Bitter Vetch.

1 *dispar*, w-y. J. 2f. 1 uneq pnt; 1 li, ot; sti o, a: r ss, fi. S.

ORON'TIUM. 6—1. 7. Gr. *orontion*, Orontes. Golden club.

1 *aquaticum*, golden club. y. M. 2f. 1 ln-o: sk cy, on scp. 12—20 i.

OR'THOCARPUS. 12—2. 36. Gr. *orthos*, straight, and *carpos*, fruit.

1 *luteus*, y. Ju. st si, t, hir-pilose: 1 al, ss, ln-li, a, en. 12—14 f. S.

OR'THOPO'GON. 3—2. 10. Gr. *orthos*, straight, and *pōgōn*, beard.

2 *hirtellum*, Au. 2f. sk com; sk ap, al: va of c awned, out awn lg. S.

ORY'ZA. 6—2. 10. Gr. *oruz*a, rice, Arabic *êruz*.

1 *sativa*, rice ☼. culm jt: 1 cls: pn tm. E.

ORYZOP'SIS. 3—2. 10. Gr. *oruz*a, rice, and *opsis*, resemblance. Mt. Rice.

1 *asperifolia*, 2f. culm na: 1 e, at point: f in r pn. 18 i.

- OSMUN'DA. 21—1. 5. Relating to medical powers. Flower fern.
 1 *cinnamomea*, O. y. J. M. fr pnt: seg ov, en: fer fr op r, woolly. 3-6 f.
 2 *interrupta*, O. g-y. J. 2f. l on fr, with fer ab, below sm among them.
 3 *regalis*, O. r-y. J. 2f. fr bipnt, tm in r, brh, without h.
 4 *claytoniana*? 2f. fr pnt, sml masses of d at origin l. 20—30 i.
 OSTRYA. 19—12. 99. Gr. *ostreon*, a shell. Iron-wood.
 1 *virginica*, O. g. M. ½. l o-ol, sub-cor, ac, uneq sr. 20—40 f.
 OX'ALIS. 10—5. 73. Gr. *oxus*, sour. Wood sorrel.
 1 *acetosella*, O. w. r. M. 2f. st-less; sep l-f, lg l: l ter, br obcor, rd lo.
 2 *violacea*, p. J. 2f. st-less: sep u; pd sub-pu: fno: l ter, obcor, g.
 3 *stricta*, O. y. J. ☼. hir: st e, brh: pd u: l ter, obcor: pt ob. 6--12 i.
 4 *corniculata*, y. M. ☼. pu: st brh, pc: u lg as pe: l te, obcor.
 5 *trilliifolia*, st-less: pd u, eq pe: l ter: l obcor, g: styles of lg s.
 6 *lyoni*, y. J. 2f. pilose: st brh, dc: pd 2-f, lg pe: l ter, obcor-2-lo.
 7 *dilleni*, y. ☼. hir: st l, e, rough: u lg l: l ter, obcor: pt em.
 8 *recurva*, M. 2f. pilose: st e: u lg l: pt ot: s lg c: styles sh. 4-8 i.
 9 *furcata*, Ap. 2f. pilose: st e, brh: pt sub-em: style lg as s. 3-6 i.
 OXYCOC'CUS. 8—1. 51. Gr. *oxus*, sour, and *kokkos*, berry. Cranberry.
 1 *macrocarpus*, O. r. J. ½. cip: st as: l ol, ot be: pd el: di of co ln-li.
 2 *vulgaris*, r. J. ½. crp: l ov, en: mr revolute, sub-a, white be: pd el.
 3 *erythrocarpus*, J. ½. e: l ov, ac; sr, cil: pd ax: col g, revolute. S.
 OXYDE'NIA. 3—2. 10. Gr. *oxus*, sour, and *adēn*, gland.
 1 *attenuata*, O. Au. ☼. pn si: sk lg, nm, attenuated. 2-3 f. S.
 OXY'RUA. 6—2. 28. Gr. *oxus*, acid.
 1 *reniformis*, J. 2f. l of c ol, half lg of ob va: rad l ren, lg-pe. 2-3 i.
 OX'YTRO'PIS. 16—10. 93. Gr. *oxus*, pointed, and *tropis*, a keel.
 1 *uralepsis*, r-w. st-less, v: l ln-ol: sep lg l, sep & c hir-woolly, hd my-f.
 2 *arctica*, r-w. st-less: sti pe: l op, al, ov-ol: hd sub-u, few-f: le e.
 3 *campestris*, y. st-less: l my-pa, ln: sep dc, sub-eq to l: sk el: bt sh c.
 4 *splendens*, st-less: 13 or 4 wr, ln, a: h: sep lg l; sep pe spr h.
 5 *lamberti*, p. Ju. 2f. st-less, si: l nm, ln-ol, a each end: sep eq to l.
 PACHY'SAN'DRA. 19—4. 96. Gr. *pachus*, thick, *aner* (*andros*) stamen.
 1 *procumbens*, g-w. J. 2f. st pc: l sh, ov, cre-to ab: c cil: cps pu. S.
 PÆO'NIA. 12—3. 61. Pæon. Peony.
 1 *officinalis*, r. J. 2f. l dec; l lo, lo br-ln: cps d. E.
 PA'NAX. 5—2. 59. Gr. *pan*, all, and *akos*, medicine. Ginseng.
 1 *trifolia*, w. 2f. l in 3 or q; l sr, ln-ol, sub-ss; ro tu, rd.
 2 *quinquefolia*, ginseng. w. M. 2f. ro fu; l ter, q: l ov, ac, pe. 1-2 i.
 PANCRAT'IIUM. 6—1. 17. *pan*, all, and *krates*, to overcome.
 1 *mexicanum*, w. M. 2f. spa 2-f. l ln-ol: 6 teeth of ne s. 18-24 i. S.
 2 *maritimum*, w. Ju. 2f. spa my-f: l ln-li: ne 12 teeth, not s. 12-18 i.
 3 *rotatum*, w. Ju. 2f. spa my-f: l ln-li: ne salver below, 6 s teeth.
 PAN'ICUM. 3—2. 10. Lat. *panis*, bread. Barn grass; panic.
 1 *crus-galli*, O. Au. ☼. r al pa, com: rachis 5-an: glu tm. 2—4 f.
 2 *hispidum*, S. ☼. pn com, no: r al: glu tm in his brs: she his. 3--4 f.
 3 *clandestinum*, Au. 2f. culm sh ax brh: l br-ln, cor at base. 2--3 f.
 4 *pedunculatum*, Ju. 2f. culm dic: l br ln, sub-pilose ab, attenuate. 3-4 f.
 5 *latifolium*, Ju. 2f. culm si, b at jt: l ln-ol, so, she sm pu: pn tm. 1 f.
 6 *scoparium*, 2f. v: l ln: pn e, com, se, brh: sk o, pu. 2 f.
 7 *nervosum*, Ju. 2f. si: nodes so: l br-ln, so, sub-cil on mr. 3--4 f.
 8 *macrocarpon*, 2f. culm e, si: l ln-li, e, h be: jt na: she his. 3 f.
 9 *pubescens*, J. 2f. e, brh, l, soft-pu: l ln, cil: pn sml, few-f, free. 18 i.

- 10 *involutum*, 2f. culm ces, si, brh base: l e, sm rigid, nr, lg in v. 1 f.
 11 *depauperatum*, J. 2f. culm ces, h jt: l ln-li, so or h: she pu. 1 f.
 12 *dichotomum*, Au. 2f. culm brh, dic ab; brh fas: l nm, so, ln.
 13 *nitidum*, Ju. 2f. culm si, e, so: she b at throat: l few, rt, br li.
 14 *agrostoides*, Au. 2f. culm cp, so, e: l lg: pn lt tm, py, spr. 2--3 f.
 15 *virgatum*, Au. 2f. all so: pn lr: f ac: va abr f eq. 3---4 f.
 16 *anceps*, Au. 2f. culm cp: she pilose: pn si brh: sk sub-r, ac. 3 f.
 17 *rectum*, Ju. pn sl, sh tm l: brh si, fl: sk al, pd, ob: glu striate, a.
 18 *verrucosum*, Au. 2f. culm dc, brh, so: l so: pn spr, few-f. 18 i.
 19 *proliferum*, S. ☼. sulum geniculate at base, so; pn tm, ax. 2--4 f.
 20 *capilla're*, culm si: she h: pn lr, cps expanding, sk lg pd. 1---2 f.
 21 *longifolium*, S. 2f. so: culm cp, e, si: l lg, nr: pn si, cl: sk ac. 2 f.
 22 *nodiflorum*, Ju. pn sml, lt, tm: glu o, pu: l nr, sh, b at throat.
 23 *ciliatum*, J. 2f. st dc: pn few-f, expanding: l sh, ln, she g, cil. 8--15 i.
 24 *pauciflorum*, J. 2f. pn expanding, few-f: f lr: l nr-ln, cil base. 12-18 i.
 25 *fus'co-ru'bens*, Au. r li, virgate: glu cl: h un di of pn. S.
 26 *striatum*, pn ol: glu lr, g, green, striate.
 27 *diffusum*, Ju. pn si, cap, expanding: f rt, a: st si: l lg-li, throat v.
 28 *gibbum*, Ju. ☼? r my-f, ap, sk: vs of c n: f caducous.
 29 *molle*, Au. 2f. sk pn, al, expanding, one-sided: sk apx, pd. 4--6 f.
 30 *gym'nocar'pon*, Au. 2f. sk pn: sk in 2 rows, few-f. 2--4 f.
 31 *hians*, Au. ☼? st g, dc: pn r: va of c sub-eq, expanding. 10---15 i.
 32 *amarum*, Oc. ☼? g: l gl: pn ap: glu ac. 2--3 f.
 33 *scabriusculum*, st e, lr, under surface of l sca: pn lr, py: f a, g. 2--3 f.
 34 *multiflorum*, J. 2f. st e, si, g: l br-ln, h at base: pn brh. 24--30 i.
 35 *ovale*, pu: pn diffused: f ol, ov, h: l ln-o, sub-cor. 1--2 f.
 36 *lanuginosum*, 2f. pu: pn diffused, sm cap: f ov, sml: l nr ln. 1--2 f.
 37 *viscidum*, J. 2f. d, glutinous: st be each jt marked so ring. 2---4 f.
 38 *villosum*, 2f. v: st e sm brh; pn few-f: f ob: l e, flat. 1---2 f.
 39 *sphaerocarpum*, Ap. 2f. l ln-li, a, base and she cil: pn spr. 12--18 i.
 40 *ensifolium*, 2f. sml, g: l ln-o, a, spr: pn sml. few-f. 12---18 i.
 41 *barbulatum*, 2f. pn com, spr: l ln-o, sub-ac: jt of st b.
 42 *melicarium*, st weak: l nr: pn contracted: glu mem, ln, eq.
 43 *angustifolium*, pn few-f, spr: l sc, ln-li, g be, cil. 1--3 f.
 44 *divergens*, Au. 2f. st assurgent: pn diffuse: f sml, sl, lg pd. 1 f.
 45 *luxiflorum*, ☼. pn spr, lax, pilose: glu sc, ot, pu.
 46 *microcarpum*, pn cap, brh, expanding: f ov, g: l ln-li, g.
 PAPA'VER. 12--1. 62. Celtic *papa*, pap, to induce sleep. Poppy.
 1 *nudicaule*, y. ♂. cps his: scp l-f, na, his: l sub-pnt; l ln; lower gh.
 2 *rheas*, r. J. ☼. cps g, sub-glo: st my-f, pilose, h spr: l gh-pnt. E.
 3 *somniferum*, opium poppy. J. ☼. c and cps g: l cls, gh, gl.
 PARIETA'RIA. 19--4. 98. Lat. *paries*, (*tis*) a wall. Pellitory.
 1 *pennsylvanica*, J. ☼. l ln-ol, ve, with opaque ptr: inv 3-l, lg f. 12-15 i.
 2 *floridana*, l o, rd, ot, opaque dotted: f lg as inv: st as. 12-18 i. S.
 PARME'LIA. 21--5. 2. Gr. *parmc*, shield, and *cilco*, to enclose.
 1 *herbacea*, fr or, mem grn ab, be brown: d, lo waved and cut seg rd, cre rec red; mr rg and cre. 1½ i.
 2 *saxatilis*, fr or, gray rg pitted be: black, seg im, sin sub-re, rec ches-nut-brown: mr sub-cre. 2½ i.
 PARNAS'SIA. 5--4. 84. Mt. Parnassus. Flowering plantain.
 1 *americana*, w. y. p. Ju. 2f. l rad, hr or, 5 to 9-n: ne five. 6--18 i.
 2 *palustris*, w-y. Ju. scales nm, brs: l all cor; cau ss.

- 3 *parviflora*, slender brs scales 5: rad l o, ta into pe; cau li-ol, ss.
4 *caroliniana*, scales 3, brs: l br-o or ov; cau ss.
5 *kotzebuii*, scales 3, brs: rad and cau l hr-o: pt sm 3-n, sh c.
6 *fimbriata*, scales br wd, cre, in ke: rad l lg-pe, ear-k, cau cor ss, in ab.
7 *asarifolia*, Au. 2f. rad l ren: pt clawed. S.
PARTHE'NIUM. 17—4. 55. Gr. *pathenos*, a virgin.
1 *integrifolium*, w. 2f. l ol, uneq to: up cls. 1---2 f.
PAS'PALUM. 3—2. 10. Gr. *paspalos*, millet.
1 *ciliatifolium*, S. 2f. culm dc: l h, cil: she h: sk 1--2, lax, 3-row. 18 i.
2 *setaccum*, 2f. culm e: l and she v: sk sub-sl: f in 2-rows. 1---2 f.
3 *laeve*, S. 2f. e, so: l sh: sk nm, (3---6) al: f 2-rowed, so. 2 f.
4 *stoloniferum*, sk el r, sm wr, spr: f sr-cil, rg: l sh, sub-cor. 2 f.
5 *debile*, st weak: l and st h: sk one: f al, 1-rowed. S.
6 *floridanum*, Au. st e: lower l v; up sca, pilose; she lg: sk few. 3-4 f.
7 *plicat'ulum*, g: st e: l lg, nr: sk nm, al, e: f in 3-rows; flat va plait.
8 *prae'cox*, Ju. st e: l ln-li, g: sk nm, al: rachis nr, h at base: f 3 row.
9 *purpurascens*, Au. st e: l lg, h throat: sk nm, v at base: f in 4 rows.
10 *distichum*, Ju. 2f. st crp: l sh, sub-gl: sk 2, ss: glu ln.
11 *vaginat'um*, Ju. g: st crp, brh: l li: sk 2, tm, she by tm l. 12—18 i.
PASSIFLO'RA. 15—5. 97. Lat. *flos passionis*, passion-flower. Passion flower.
1 *lutea*, y. S. 2f. l cor, 3-to, ot, g: pe gl: pd ax, in pa: pt nr c.
2 *incarnata*, w. p. Ju. 2f. l 3-lo, sr; lo ol, a: pe two glands: inv 3-l.
3 *cærulea*, b. Ju. ½. l pal, 5-par, en: pe gld: crown sh co. E.
4 *ala'ta*, Oc. ½. l ol o, en, ve: pe 4 gld: sti ln, sub-sr: inv 3-l: st 4.
5 *peltata*, ½. l pel, 3-lo, g; lo ln-li: pe 2 gld: pd sl, ax: pt 0. S.
6 *warëi*, 2f. lower l 3-lo, a: up undi, o: pe with 2 gld: pd in pa. 4-6 i.
PASTINA'CA. 5—2. 60. Lat. *pasco*, to feed. Parsnip.
1 *sativa*, y. Au. ½. l si pnt: l g. sub-pu. E.
PEC'TIS. 17—2. 55. Lat. *pecten*, a comb.
1 *angustifolius*, y. ☼. st brh ot base, diffuse: l nr-li, m. 1---2 i.
PELICULA'RIS. 13—2. 36. Lat. *pediculus*, a louse. Louse-wort.
1 *canadensis*, O. y-p. p-w. M. 2f. st si: l pnt, gh-to: hd l base. 6--12 i.
2 *gladiata*, y-p. J. 2f. st si: l ln, pnt, to: sk l, al f: cps lg ex. 1---2 f.
3 *pallida*, y. Ju. 2f. st brh, tall: l sub-op, ln, cre, to: sk l-less. 2---3 f.
4 *resupinata*, p. Ju. 2f. st si, g: l ln, to, cre: c bifid-tru: up lip of co a.
5 *hirsuta*, r. 2f. st si: l pnt; l ln, ot to: c hir, 5-cleft: up lip of co ot.
6 *euphrasioides*, y. 2f. st brh, pu: l pnt, to: c tubular, 2-parted. 6-8 i.
7 *recuti'ta*, p. Ju. 2f. st si: l pnt; di ln, pnt-to: sk cp, l; c g, 5-to.
8 *elata*, p. Ju. 2f. st si: l pnt; di ln-li, cre: sk lax, sm l: c g, 5-to. 2 f.
9 *lapponica*, y. Ju. 2f. st si: l pnt: di sr: c 2-cleft, ol: up lip of co tru.
10 *groenlandica*, p. Ju. 2f. st si: l pnt; di ln, ac, sr: c g, 5-to; co close.
11 *verticilla'ta*, p. 2f. st si: cau l pnt, in fours: di li, a to. 2 i.
12 *flam'mea*, y. r. 2f. st si. l pnt; l im, o, ot, to. c 5-to: up lip c ot. 3 f
PELARGO'NIUM. 15—7. 73. Gr. *pelargos*, a stork. Geranium.
1 *triste*, u si: l h, pnt: l bipnt; di ol, a. E.
2 *daucifolium*, carrot geranium. 2f. sep si: l thrice pnt, hir: l ln-li.
3 *odoratissimum*, ½. pd sub-5 f: l rd-cor, soft.
4 *zonalc*, ½. u my-f: l hr-or, os ls, to, with cl zone near mr.
5 *in'quinans*, scarlet geranium. ½. u my-f: l rd-ren, di, cre, vicsid-d.
6 *acerifolium*, ½. u 5-f: l 5-lo-palmate, sr; wd nndi.
7 *capitatum*, rose-scented geranium. ½. f capitate: l cor, lo, soft.

8 *quercifolium*, oak-leaf geranium. \bar{h} . u sub-my-f: l cor, put, ere.

9 *graveolens*, \bar{h} . u my-f, sub-cap: l pal-7-lo; di ol, ot.

PEN'NISE'TUM. 3—2. 10. Lat. *penna*, a feather, and *seta*, bristle. Fox-tail panic.

1 *viride*, Ju. ☼. sk cy: inv of 4—10 fas brs, sca up: sk in pa. 18—24 i.

2 *glaucum*, O. J. ☼. sk cy: inv of my fas brs, sca up: per f rg. 2 f.

3 *verticillatum*, Ju. ☼. sk sm wr: brs of inv 2, sca: sk sl. 18 i.

4 *italicum*, Ju. ☼. sk com, int at base, no: sk conglm: inv lg f. 4 f.

5 *germanicum*, Ju. ☼. sk com, cp: sk glm; rachis hir: brs sh. 2—4 i.

6 *pungens*, 2f? sk t: inv my-par, 1-f; seg t, sb, sca, lg f. S.

7 *laevigatam*, Ju. 2f? so: st cp: sk: sk 1-f: inv 10-awned. 1—2 f.

8 *corrugatum*, sk t, com, brs: sk my-f. (7—10): co transversely rg. 2-3f

PENTH'O'RUM. 10—5. 86. Gr. *pente*, five, *oros*, a mark. Orpine.

1 *sedoides*, O. g-y. Ju. 2f. st brh, an: l ln, sub-ss, uneq sr. 12—18 i.

PENTSTE'MON. 13—2. 37. Gr. *pente*, five, and *stema*, stamen. Beard tongue.

1 *pubescens*, O. w-p. J. 2f. st h: l sr, ln-ol, ss: f pn: bar fi b. 1—2 f.

2 *laevigata*, w-p. Ju. 2f. st g: l so. ol-o, cls at base, to, lower en. 2 f.

3 *frutescens*, p. \bar{h} . st fru: brh an, pu ab: l ln, os dn, ss, g. 12—18 i.

4 *alpinum*, b. g: co sm bl; limb eq, 5-lo: l ln-ol, cre-du on mr. 6 i.

5 *amblynum*, p. st fru, brh: l li, shining,, m, sca on mr: pn si. 8—10 i.

6 *cristatum*, p. 2f. st low, pu: l ol, a, os dt, sub-hir: pd ax, tm. 6-8 i. S.

7 *cocculeum*, b. 2f. so: rad l li, en: cau ln-li, en, all ss: sterile fi sh.

8 *cranthera*, p. J. 2f. st and l g: l ss, ln-o, en, sub-und at mr: pd my-f.

9 *grandiflorum*, g: l half-cls, o-ol, en; up rd: f sl, ax.

10 *gravile*, p. J. st so, slender: l ro, li, a, cls, sr: fi b longitudinally.

11 *albidum*, w. low: l ln-o, sub-sr, so, ss: f sub-fas, ax and tm. 6-8 i.

12 *dissectum*, p. l op. ss, com di; seg li, ot: f pn. 2 f.

13 *nuttallii*, g: l cr, ln-o, dn, half-cls: f pn: l of c o, ac: sterile fi b apex.

PERIPLO'CA. 5—2. 47. Gr. *peri*, about, and *plokē*, twining.

1 *græca*, milk vine, p. M. \bar{h} . f hir within, tm, stg with 10 cre-

PE'TALOSTE'MON. 16—5. 93. Gr. *petalon*, a petal, and *stema*, stamen.

1 *candidum*, w. Ju. 2f. sk cy, pd: bt lg f: c g: l ln, in 3 pa.

2 *violaceum*, r-p. Au. 2f. sk cy, pd: bt eq to c; bt spt: l li, in 2-pa.

3 *villosum*, r. Au. 2f. v: st dc: sk lr, cy, sub-ss: bt sh, 5-to c: l li-ol.

4 *macrostachyum*, w. 2f. sk cy, cp, lg: bt ln, c v: l in 3 pa, ln-ol, g. 2f.

5 *carneum*, w. Ju. 2f. sk cy, pd: bt sb, l g c: l ln. 2—3 f. S.

6 *corymbosum*, w. S. 2f. pd in pn emb: c plumose: l li, unawned. 2 f.

7 *roseum*, r. g: l li: bt sb, sh: c striate, g.

PEUCED'ANUM. 5—2. 60. Gr. *peuke*, fir, and *danos*, burning. Sulphur wort.

1 *ternatum*, 2f. l ter, lg-pe: l en, lg-li, a, al below: inv w. 3 f. S.

PEZI'ZA. 21—6. 1. Lat. *pezica*, mushroom.

1 *sarcoides*, ces fleshy, sm firm, in texture, red sm ve out-side.

2 *umbrina*, lr, ces, contorted, brown.

3 *coccinea*, stiped, lr, tur or fl. scarlet within, white without, d mr ere.

PHA'CA. 16—10. 93. Gr. *phakē*, lentil.

1 *frigida*, y-w. e, g, sm brh: l 4 or 5 pa, ol-o, h be at mr: sti o-ol, eil.

2 *aboriginorum*, r-w. pu: st e, ra, striate: l sm 5-pa, ln-ol, ot: sti o.

3 *glabriuscula*, g, sc li: st e, sub-si, striate. l in 5 or 6 pa, ln-li, sub-a.

4 *elegans*, sub-g: st sub-ram, e or as, an: l 5 to 7 pa, ol, ot, wd at base.

5 *villosa*, O. y. Ju. 2f. st-less, v: l ov, g: pd lg as l, le v, ol. S.

6 *triphylla*, 2f. st-less: 1 ter: 1 ln, ss: scp none: le ss, ol.

PHACE'LIA. 5—1. 43. Gr. *phakelos*, bundle.

1 *bipinnatifida*, b. M. e: 1 pnt; di gh-lo: r bifid, ol, my-f: di cō en. 1 f.

2 *imbriata*, b. M. ☼. as, h: 1 ss, pnt: di ln, a, en, his ab, g be. 1 f.

3 *parviflora*, b. M. ☼. pu: 1 sub-ss, pnt; di ol-ot, en: r sl. 6—8 i.

4 *integrifolia*, e, pu: 1 pe, o, cre-sr: r nm, dense-f.

5 *heterophyllu*, b. Ju. ♀. e, his: 1 pe, pnt: di ln, en, n, tm, el. S.

PHALAN'GIUM. 6—1. 16. Gr. *phalagx*, Tarantula.

1 *esculentum*, b. M. 2f. ro bu: scp lg li carinate l: sk r. 12—18 i.

2 *croceum*, y. 2f. ro bu: scp sh l: sk py: bt sh: seed glo, so. S.

PHAL'ARIS. 3—2. 10. Gr. *phalos*, shining.

1 *americana*, O. Ju. 2f. pn ol, sk: glu of c boat-shaped, sr: co uneq.

2 *canariensis*, O. Ju. ☼. pn sub-sk, o: c boat form, en at apex. 18 i.

PHASE'OLUS. 16—10. 93. Lat. *phaselus*, a little ship, Bean, ground nut.

1. S. G. PHASE'OLUS, *proper*, (EU'PHASE'OLUS.) Gr. *eu*, beautiful. Bean.

1 *perennis*, r-p. 2f. h: 1 o, ac, 3-n: r 1 to 3, ax; pn lg l; bt sml.

2 *vulgaris*, p. w. Ju. ☼. sm g: 1 o, ac: r pd, sh l; pd in pa: le pd. E.

3 *multiflorus*, r. w. Ju. ☼. sub-g; 1 o, ac: r pd, lg l; pd in pa: bt cp.

4 *lunatus*, g-w. Ju. ☼. lo-ac: r sh l; pd in pa: le sb: seed cp, white.

2. S. G. STRO'PHOSTY'LES. (1) Gr. *strophos*, twisted, *stulos*, style.

5 *helvolus*, st twi: 1 ol, sub-pnt: pd lg l, 3-f at apex.

6 *diversifolius*, p. st prt, sca: 1 an, 2 or 3-lo: pd lg l. my f; f hd. S.

7 *vexillatus*, st prt, twi, sm h: 1 ol-o: pd lg; f 5 to 7, in hd: banner lr.

3. S. G. AM'PHICAR'PA. (1) Gr. *amphi*, around, and *karpōs*, fruit.

8 *monoica*, O. b. & w. Ju. ☼. r pnd: st v: rad f w pt: 1 ter; 1 o. 4 f.

9 *sarmentosa*, w. Au. r fi, 3-f, w pt: 1 ter, 1 o, g: cps ol, 2 seeded.

4. S. G. RHYNCHO'SIA. (1) Gr. *rugchos*, a beak.

10 *reniformis*, y. 2f. st e, low. hir: sti ln-ol: 1 rd: r ss, my-f. S.

11 *difformis*, 2f. st twi: sti ln-ol, lower l si, upper trifoliate: r lg-pd.

12 *erecta*, 2f. st e, an: brh sm twi: 1 ov, sub-a, net-ve: r ax, lg l.

13 *caribaca*, st pu: 1 rh-o, a, pte be: r lg l: le sabre-form, his.

5. S. G. WISTAR'IA. (2) Dr. Caspar Wistar.

14 *frutescens*, b-p. ♀. wi 2-eared: gm g: st cli: r tm. S.

6. S. G. A'PIOS. (1) Gr. wild pear, which the roots resemble in form. Ground-nut.

15 *tuberosa*, O. b-p. Ju. 2f. st twi: 1 pnt, 7 ln-o l: r sh l, ax: ro tub.

PHILADEL'THUS. 11—1. 89. Gr. *philos*, love, and *adelphos*, a brother.

Mock orange. Scentless syringa.

1 *coronarius*, mock orange. w. J. ♀. styles distinct: 1 o, sub-dn. E.

2 *inodorus*, w. J. ♀. lo, ac, en: di of c a: style undi, lg s: stg 4. S.

3 *grandiflorus*, w. J. ♀. lo, ac, dn: ax of ve fas of h be: di of c ac.

4 *lewisii*, Ju. ♀. lo, a, sub-en, cil mr: di of c a: style 3-cleft, lg as s.

5 *hirsutus*, w. ♀. lo-o, a, an-dn, hir ab, v be: style stg undi: pd 2-bt.

PHILOX'ERUS. 15—5. 30. Gr. *philos*, love, and *xeros*, burnt.

1 *vermicularis*, J. 2f. g: st crp: 1 sub-t, fleshy: f in tm, sl, ol hd. S.

PHLE'UM. 3—2. 10. Gr. *phleon*, cat-tail-grass. Timothy.

1 *pratense*, O. J. 2f. and ♂. sk cy, c m-awned; ke cil. 2—3 f.

2 *alpinum*, sk o or cy-o, hir or v.

PHLOX. 5—1. 45. Gr. *phlox*, a flame. Lichnidia.

1 *paniculata*, r. w. Ju. 2f. g, e: 1 ln, nr, flat; mr rough: cmb pn. 2--3 f.

(1) Glycine. (2) *Thyrsanthus*, of Glycine.

- 2 *pyramidalis*, p. J. 2f. e, g: st sca: 1 hr-o, a' pn fs, py. 2—3 f.
 3 *maculata*, r. w. Ju. 2f. e: st spotted, sca: 1 ln-ol, g; mir rough. 2 f.
 4 *aristata*, r. w. J. 2f. e, pu: 1 ln-li: pn lax, fs: pd sm in pa: di of c ob.
 5 *pilosa*, p. w. J. 2f. sml dc, pu: 1 ln-li, sh: cmb sub-fs. 12—18 i.
 6 *divaricata*, p-b. 2f. pn, 1 ln, ov, up al: brh lax, few-f. 1—2 f.
 7 *reptans*, b-p. J. 2f. crp, pu: radl ob-spt, cau ln-ov: cmb-spr. 8—18 i.
 8 *subulata*, r. 2f. ces, white pu: 1 li, pungent, cil: cmb few-f. 3—6 i.
 9 *setacea*, r. J. 2f. ces, pu: 1 fas, sb, pungent, cil: pd few, tm, sub-u.
 10 *undulata*, b. Au. 2f. e, g: 1 ln-ol, sca on mr: cmb pn. 2 f. S.
 11 *carolina*, p. Au. 2f. e: st pu: 1 ln-o, so: cmb sub-fs; brh 3-f
 12 *glaberrima*, p. Ju. 2f, ces: st e: 1 ln-li, g: cmb sml, tin, sub-fs.
 13 *speciosa*, w. p. J. ½. e, g, fru, brh: 1 li: up al; dilated at base.
 14 *orata*, r-p. J. 2f. e, g. radl o, a, sm fleshy; cau ln: cmb sub-fs.
 15 *acuminata*, p. Au. 2f. 1 spt-o, ac, sca; up ln: cmb tm. 3—5 i.
 16 *nitida*, p. J. 2f. e, g: st sca: 1 o-ol, sub-cr: cmb fs: di of co ob.
 17 *cordata*, Au. 1 ol-cor, sub-ac, mr sca: cmb pn: teeth of c lg-awned.
 18 *bifida*, p. Ap. st e, brh, pu: 1 ln-o and ln-li, sm cls, op. 4—6 i.
 PHRAG'MITES. 3—2. 10. Gr. *phragma*, palisadoes. Reed.
 1 *communis*, Au. 2f. c 5-f: flg c. 6—12 f.
 PHRY'MA. 13—1. 42. Gr. *phrugma*, dried. Lopseed.
 1 *leptostachya*, O. p-w. 2f. l o, sr, pe: sk tm, slender: f op. 2—3 f.
 PHYLLAC'TIS. 3—1. 56. Gr. *phullon*, leaf, and *ago*, to bring.
 1 *obovata*, Oc. st-less: ro fu: 1 radiating, li-spt, ot, hir-pilose. S.
 PHYLLAN'THUS. 19—5. 96. Gr. *phullon*, leaf, and *anthos*, flower.
 1 *obovatus*, ☼. 1 al, ov, ot, g, sm dist: ffew, (2—4,) ax. pd, no. 12 i.
 PHY'SALIS. 5—1. 38. Gr. *phusa*, a bladder. Yellow henbane.
 1 *visco'sa*, O. Ju. 2f. 1 in pa, hr, ov, re, ot, sub-tom: st pn ab: fru c pu.
 2 *obscura*, y. p. Ju. 1 sub-cor, or, ac, uneq dn: st her, di, brh; brh an.
 3 *pennsylvanica*, y. J. 2f. l o, sub-re. ot, na: st brh: pd sl, lg pe 1 f.
 4 *philadelphica*, y. p. Ju. ☼. 1 o, re-to, g: st brh, pd sl
 5 *lanccolata*, y. J. 2f. 1 in pa, ln-ov, sub-en, nr into pe, pu: st dic.
 6 *lobata*, g. 1 ol, sm fleshy, ly-lo, nr pe at base, g, rev at mr, st her, brh.
 7 *alkckengi*, 2f. 1 in pa. en, a: st sub-ram: c fru red. E.
 8 *pubescens*, O. y. Ju. ☼. 1 v, sub-cor: st brh: f sl, pnd: fru c rd glo.
 9 *somnifera*, y. Ju. 2f. tom: 1 o, en: f crd, sh-pd: co bl.
 PHYTOLAC'CA. 10—10. 29. Gr. *phuton*, plant, and *lachanon*, potherb.
 Poke-weed.
 1 *dceandra*, O. w. Ju. 2f. l o, a both ends: f r: ber flattened ends. 3—6 f.
 PINCKNEYA. 5—1. 57. Gen. C. W. Pinckney.
 1 *pubens*, p. J. ½. l op, ln, en, pilose shining ab, tom be, sub-ac. c
 sup, cl.
 PINGUL'ULA. 2—1. 35. Lat. *pinguis*, fat. Butter-wort.
 1 *clatior*, 2f. nec sb, ot, sh co: tube ventricose ab: scp v. 4—12 i.
 2 *lutea*, p. Ap. 2f. border of co 5-cleft, di 2-lo; lo 2-to: spur sb, sh
 tube. 6—8 i. S.
 3 *pumila*, b. Ap. 2f. border of co 5-cleft, di em, lo en: spur sb. 3—5 i.
 4 *acutifolia*, Ju. 2f. g: 1 e, ov, a.
 PINUS. 19—15. 100. Gr. *pinax*, tablet of pine. Pine, fir, balsam, 1.
 Sprnce 2. Hemlock 4. Larch 18.
 1 *balsamea*, O. M. ½. 1 flat, em, en, gl be, sub-e ab, rc-spr: cy, e.
 2 *fraseri*, J. ½. 1 sl, flat, em, gl be, sm 1-sided, ab, e: o-ol, e: bt el, rx,
 wd-ol, em, sh-m, gh-to.

- 3 *taxifolia*, \bar{h} . 1 sl, flat, sub-dist: cones ol.
- 4 *canadensis*, O. M. \bar{h} . 1 flat, 2-rank: strobiles o, tm, lg l.
- 5 *nigra*, M. \bar{h} . 1 4-sided, sc, brh e, straight: strobiles o: scales ov, mr, erose-to at apex.
- 6 *rubra*, \bar{h} . 1 sl, sb: strobiles ol, ot: scales rd, sub-2-lo: mr en.
- 7 *alba*, O. M. \bar{h} . 1 4-sided, inc: strobiles sub-cy, lax: scales ob, en.
- 8 *resinosa*, \bar{h} . 1 she el: strobiles o-conic, rd at base, sub-sl, half lg as l: scales dilated, nnarined.
- 9 *inops*, M. \bar{h} . 1 sh: strobiles ol conic, rc, lg of l: prickles scales sb.
- 10 *banksiana*, M. \bar{h} . 1 sh, rigid: strobiles ic, twisted: scales pk.
- 11 *variabilis*, M. \bar{h} . 1 in pa, in threes: strobiles o-conic, sub-sl.
- 12 *rigida*, O. M. \bar{h} . 1 she: same e-in: strobiles o, sc: sp of scale rx.
- 13 *scrotina*, M. \bar{h} . 1 el: pk of scales straight slender.
- 14 *strobis*, O. M. \bar{h} . 1 slender: she sh: strobiles pnd, cy, lg l.
- 15 *pendula*, M. \bar{h} . strobiles ol: mr of scales inflexed: bt gui.
- 16 *microcarpa*, \bar{h} . 1 deciduous: strobiles rd, few-f: scales rx: bt ov ot.
- 17 *flexilis*, 1 in fives, sh rigid: she sh: strobile e: scales lr unarm.
- 18 *larix*, \bar{h} . l: strobiles o-ol: mr of scales rx, torn: bt gui. E.
- 19 *pungens*, \bar{h} . 1 ps, sh, a: strobiles o-conic: pk scales el, sb. S.
- 20 *taeda*, M. \bar{h} . 1 in threes, cl: she el: strobiles ol-conic, sh l: sp in flexed. Var. so, 1 in 2s or 3s: bark so.
- 21 *palustris*, M. \bar{h} . 1 in threes, lg: sti pnt: strobiles sub-cy, m.
- PI'PER. 2—2. 98. Indian origin. Pepper.
- 1 *leptostachyon*, \odot . her smt: l ob, ot. sub-3-n, pu: sk ax, fi. 6—12 i. S.
- PIP'TATHE'RUM. 3—2. 10. Gr. *pipto*, to fall, and *theros*, harvest. Black seed millet.
- 1 *racemosum*, Au. 2f. pn si: fln-o: co h: awn twice lg as va.
- PISTI'A. 5—8. 7. Gr. *pistos*, drink.
- 1 *spatulata*, w. Ju. 1 nr into pe, dilated, rd ot towards summit. S.
- PI'SUM. 16—10. 93. Gr. *pison*, a pea. Pea.
- 1 *sativum*, p. w. J. \odot . pe t: sti rd cre at base: pd my-f. E.
- PLANE'RA. 5—2. 99. James Planer.
- 1 *aquatica*, \bar{h} . 1 o, a, sr. eq at base, sca, sh pe. 25—30 f. S.
- PLAN'TAGO. 4—1. 31. Lat. *planta*, sole of the foot. Plantain.
- 1 *major*, O. w. J. 2f. 1 o, sub-dt, sub-g: sept t: sk ol, im. 6—24 i.
- 2 *lanccolata*, J. 2f. 1 ln, v: sk sh, t-cy. bt o, ac: sep an, with cp h. 1—2 f.
- 3 *virginica*, r-y. J. \odot . pu all part: 1 ln-o, sub-dt: frt: sep an: co ad-heres gm closely, appears sup. 3—8 i.
- 4 *cordata*, w. J. 2f. 1 hr-o, br, sub-dn, g α sk lg: f sub-im, lower sc: bt o, ot. 12—18 i.
- 5 *media*, w. J. 2f. 1 ln-o, pu: sk cy: sep t.
- 6 *maritima*, Au. 2f. 1 li, h near base: sept t: sk cy: bt a. 6—10 i.
- 7 *pusilla*, Au. \odot . pu: 1 li-sb, flat, en, a: sep t, lg l: sk cy.
- 8 *cucullata*, Ju. 2f. 1 o, concave, 9-n, pu be: sk cy, im.
- 9 *criopoda*, 2f. st-less: pe cover at base: 1 br ln, lg-pe, g, en, 5-n: sep t, g: sk cy, exceed l: frt: s & s lg: bt br-o, ot: cps 2-seed. 9—12 i.
- 10 *caroliniana*, Ju. δ . all g: 1 ln, en, lg: frt: st t. S.
- 11 *interrupta*, Ju. 2f. 1 ln, en: sm pilose: sk lg, int: fg.
- 12 *glabra*, 1 o, dt, so: sep sub-cp, eq to l: f sc: bt o, ac.
- 13 *gnaphaloides*, Ju. \odot . v: 1 ln-li, en, na ab: sep t. lg l: sk cy, im.
- PLAT'ANUS. 19—13. 99. Gr. *platys*, broad. Button wood.
- 1 *occidentalis*, O. J. \bar{h} . 1 5 an, os lo, to, pu be: st brh white.

PLEE'A. 9—2. 13. Gr. *pleiōn*, abundance.

1 *tenuifolia*, y-r. 2f. g: l nr-ensif: she of sk 1-f. 1—2 f. S.

PLEURA'PHIS. 3—2. 10. Gr. *pleura*, the rib, and *aphc*, touch.

1 *jamesii*, Ju. 2f. culm t, so: sk tm, e; sk ss, in o congeries at jt of rachis: inv wooly third lg f. 1 f. S.

PO'A. 3—2. 10. Gr. *poa*, grass. Pasture grass, blue grass, 10. Meadow grass 8.

1 *annua*, Ap. ☼. pn sub-second: sk o-ol, 5-f: f free: culm cp. 6—8 i.

2 *fasciculata*, Au. 2f. pn spr; brh fas, crd: sk ol, 3-f: f free. 1—2 f.

3 *dentata*, 2f. pn sm spr; brh cap: sk ln, 5-f; f free: c un-cq: lower glu ot, 3-n: lower va of co 5-n, 5-to at apex. 3 f.

4 *aquatica*, Var. *americana*, Au. 2f. pn e, half-wr, diffuse; brh fl, so: sk li, 6-8-f: f o, ot, free: l br-li, with she sō. 4—5 f.

5 *maritima*, J. 2f. pn brh, sm crd: sk 5-f, t: f ot, 5-n: ro crp. 1 f.

6 *brerifolia*, Ap. 2f. pn loose; brh pa: c 3-4-f: co pu: l sh: sti ac. 2 f.

7 *pungens*, Ap. 2f. culm cp: l sh: pn sub-si, spr: sk o, 3-4-f. 18 i.

8 *pratensis*, O. J. 2f. pn diffuse: up l sh so sbe: f a, 5-n, webbed at base: sti sh tru: ro crp. 2—3 f.

9 *trivialis*, Ju. 2f. pn eq, diffuse: sk ol-o, 3-f: f webbed at base, 5-n: culm and she roughish: sti ol: ro crp. 2—3 f.

10 *compressa*, Ju. 2f. pn sm 1-sid: sk ol, 3-6-f: f webbed. 12—18 i.

11 *scrotiua*, J. 2f. pn el, diffuse, at lg sm 1-side: sk ln-o, 2-3-f. 2—3 f.

12 *nemorialis*, 2f. pn weak; brh fl: sk o, 3-f; f webbed, a, os n. 2 f.

13 *nercata*, J. 2f. pn eq, diffuse; brh at lg pnd: sk 5-f: f free, 7-n. 3—4 f.

14 *clongata*, 2f. pn el, r; brh sl, ap: sk o ot, tumid, 3-f; f free. 3 f.

15 *obtusa*, Au. 2f. pn o: sk o, ot; lower va 7-n: l lg as culm. 2—3 f.

16 *canadensis*, O. Ju. 2f. pn lr, effuse; brh half-wr, fl, at lg pnd: sk o, tumid, 6-8-f; f free; lower va a, 7-n; up va ot: s 2. 3—4 f.

17 *capillaris*, Au. ☼. pn lr, spr, cap: sk 3-f, o, a; f free. 12 i.

18 *hirsuta*, Ju. 2f. culm e, cp, si: she h: pn lr, cap; brh spr at lg rx: sk ol, 5-f: co cil on mr. V. sk li, 10-15-f. 18 i.

19 *pectinacea*, Ju. ☼. culm ces, o: l h at base: pn cap, py. 8—12 i.

20 *reptans*, O. Au. ☼? die: culm brh, crp: pn fas: sk ln-li, 12-20-f. 8 i.

21 *cragrostis*, Ju. ☼. pn eq, spr: lower brh h in ax: sk ln-li. 12—18 i.

22 *tenuis*, Au. 2f? pn brh, spr, cap: sk 3-f, g, lg-pd: l li, lg. 12—18 i. S.

23 *parviflora*, J. 2f. pn diffuse, cap: sk sml, 3-f; f ot, caducous. 12—18 i.

24 *conferta*, pn tm, ax, e, cp, clustered f: sk 8-f, g. 2—3 f.

25 *angustifolia*, M. 2f. l li, inv: pn sm crd: sk ln, a, 4-f; f v bsse. 1—2 f.

26 *nitida*, Ju. ☼? ste, g: pn l, diffuse, cap. 1 f.

27 *rigida*, 2f. pn ln, brh 1-sided; brh al, 1-sided. 2—4 i.

28 *airoides*, pn e; brh cap, half wr: l lg she, sh a, sk ol, ot, sub-ss, 4-6-f: c uneq, sh co. 4—5 f.

PODOPHYL'UM. 12—1. 62. Gr. *pous*, foot, and *phūllon*, leaf. Wild mandrake.

1 *pectatum*, O. w. M. 2f. st tm, 2 pal l: f si, inserted in fork. 1—2 f.

2 *callicarpum*, w-r 2f. st forked: fru ol, lg filbert.

PODOSTE'MUM. 19—2. 7. Gr. *pous*, foot, and *stemon*, stamen. Thread-foot.

1 *ceratophyllum*, Ju. 2f. st fi, floating: l pnt: f ax.

PODOSTIG'MA. 18—5. 47. Gr. *pous*, foot, and *stigma*, stigma.

1 *pubescens*, y-g. M. 2f. st e: l li: u tm ax: pt e, lg c. 12—18 i. S.

2 *viridis*, g. p. M. 2f. st e: l pe, ol, ot, so; u few, tm: pt e, lg c.

- POGO'NIA. 18—1. 21. Gr. *pogon*, a beard. Snake mouth.
 1 *ophioglossoides*, O. r. Ju. 2f. ro fi: sep 2 distant l, 1 or 2-f. 8—12 i.
 2 *verticillata*, y-r. J. 2f. l 5, in wr, ln-ol: st 1-f: 3 pt lg-li, inner ln: lip 3-lo; middle di undulated. 6—12 i.
 3 *divaricata*, p. J. 2f. ro fi: sep 1-f, ln-ol l: outer pt lg-li. 18—24 i. S.
 POLEMO'NIUM. 5—1. 45. Gr. *polemos*, war. Greek valerian.
 1 *reptans*, b. M. 2f. l pnt, l 5-13: f tm, no.
 POLYAN'THES. 6—1. 14. Gr. *polūs*, many, and *karpos*, fruit Tu-berose.
 1 *tuberosa*, 2f. fal, in pa: ro tu: sep sealy: l li, lg. E.
 POLYCAR'PON. 3—3. 30. Gr. *polūs*, many, and *karpos*, fruit.
 1 *tetraphyllum*, w. J. ☼? st brh, g, striate, knotted: l op in fours, ob, ot, en, g, nr at base. 3—6 i. S.
 POLYCNEMUM. 3—1. 29. Gr. *polūs*, many, *knēme*, knee.
 1 *americanum*, 2f. ces: l con, crd, sb, 3-an, pungent: f tm. S.
 POLYG'ALA. 16—6. 93. Gr. *polūs*, many, and *gala*, milk. Milkwort.
 Flowering wintergreen 3. Seneca snake-root 5.
 1 *incarnata*, r. J. ☼. st sm si. e: l sc, sb: sk ov-ol: co el tube crested.
 2 *polygama*, r. J. 2f. st sub-si, e: l obln li, m: tm r per f: rad prt, bt sml, sb, caducous: wi rd, lg cps. 6—12 i.
 3 *paucifolia*, r. M. 2f. sml, lr-f: st si, e, na: l o, a, g. top of st. 3—4 i.
 4 *uniflora*, r. Ju. 2f. sml: st si, e, na: l few, brd-o, nr into pe: f w crest.
 5 *senega*, r. or w. J. 2f. st e, si, l: l al, ln: sk tm, fi: fal, not crested. V. l ln ov: sk sm crd: f sub-ss. 8—14 i.
 6 *lutea*, y. Ju. ☼. or ♂. st si brh: rad cau l spt, others ln, sk hd. 4-16 i.
 7 *viridescens*, g-w. Au. ☼. st e, si: l ln-li, ot: f hd tm, sub-glo.
 8 *sanguinea*, r. Ju. ☼. st e, cmb-brh at top: l al, li: f not crested, in hd sk: pe sca: wi ob as lg cps. 8—16 i.
 9 *purpurea*, Ju. r. ☼. st fs-brh: l al, ol-li: f b-less: sk cy, ot, im rachis.
 10 *verticillata*, O. w. J. ☼. st e, brh: l wr se: sk fi, pd: fal. 6—8 i.
 11 *ambigua*, p. ☼. l wr, al: st wand like brh: sk a, lg pd: f crested: wi rd ve, eq cp fru: bt caducous.
 12 *fastigiata*, ☼. st fs-brh: l al: calycine wi spr, o, a, lg cps, f crested.
 13 *cruciata*, r. g. Ju. ☼. st e, ram, wi-an: l fours, ln-li. 8—12 i.
 14 *brexifolia*, r. Ju. ☼. st e, fs-brh, an-wi: l ol-li, sh, pte, fours, wr: sk sub-capitate, pd: f sm crested: wi cor-o, a, lg cps.
 15 *ramosa*, g-y. Ju. 2f. st e, brh from base: l spt-ob; cau li, eq. 8-12 i.
 16 *corymbosa*, g-y. Ju. 2f. st e, t, na: l lg, ln-li; cau sb. 2—4 f.
 17 *setacea*, Ju. ☼. st si, se, l-less, brh near summit: l sml, se, se. S.
 18 *pubescens*, r. y. Ju. 2f. pu: st e, brh: l ln-ol, a, sub-ss: r tm.
 19 *viridescens*, y-g. Ju. st si: l wd-ob, ot: hd cy, squarrose. 1—4 i.
 20 *balduina*, y-w. Ju. st e, brh near summit: l spt-ot; cau ln: hd cmb: calycine wi se-ac. 2—3 f.
 21 *alba*, w. 2f. st si: l al, li, re at mr: sk r, lg-pd: co b: bt caducous. 6 i.
 POL'YGO'NUM. 8—3. 28. Gr. *polūs*, many, and *gonē*, corner. Knot-plat 1. Water pepper 6. Fagopyrum 23.
 1 *ariculare*, O. w. M. 2f. s 8, styles 3; l ln, sca at mr: sti sh. 6—12 i.
 2 *erectum*, O. w. J. 2f. st e, brh: l ov, a: s 5. 1—3 f.
 3 *maritimum*, w-r. Au. ♂? s 8: styles 3: l ln, gl, revolute on mr: sti torn: st diffuse, prt, suffruticose. 1—2 f.
 4 *tenue*, O. w. Ju. ☼. l lg-li, ac: sti tubular, apex v: st an e, brh. 9-18 i.
 5 *laphathifolium*, r-w. Au. ☼. s 6: styles 2: sti awnless: pd sca. 2—4 f.

- 6 *puntatum*, O. w. Au. ☼. s 8: styles 3: 1 ln, g: sti lax g, cil at apex, spotted: sk fi, sm no: bt rt al. 1—2 f.
- 7 *mite*, J. ☼. s 8: styles 3: 1 nr, ln, sub-hir: sti hir, lg-cil: sk li. 12—18 i.
- 8 *virginianum*, w. Ju. 2f. s 5: styles 2, uneq: 1 br-ov. 2—4 f.
- 9 *bistortoides*, w-r. J. 2f. st si, 1-sk: 1 ov, flat, pe: bt 1-f, 2-3-va.
- 10 *viviparum*, r. Au. 2f. st si: 1 ln-li, g; mr rev; sk si, li: bt o, ac. 6 i.
- 11 *barbatum*, r-w. Ju. s 6: styles 3: sk wand-like, tru, brs-cil. 18—24 i.
- 12 *persicæcia*, O r. Ju. ☼. s 6: styles 2: sk o-ol, e: pd so: 1 ln. 1—2 f.
- 13 *pennsylvanicum*, O. Ju. ☼. s 8: sk ol: pd his: 1 ln: sti g, not cil: st swelling knee-jt. 2—4 f.
- 14 *amphib'ium*, O. r. Au. 2f. s 5: styles 2: up 1 sub-ss ta to base; sh-pe at base, ln-ol o-ol, ta lg-ac apex, sk cy: st e, sub-de base.
- 15 *coccineum*, crp r. Au. 2f. s 5: styles 2: 1 lg-pe, ol, sub-cor at base, a at apex, g: sk cy: st strong, ro. Fred, sk not lg or thick. 6—12 f.
- 16 *fluitans*, r. Au. 2f. s 5: styles 2, half-united: 1 lg-pe, ol-ov, ta to base, ot a at apex, g: st fi: sk cy.
- 17 *articulatum*, r. w. Ju. ☼. s 8: styles 3; r sk in pn, fi: pd fi, sl, from ab im tru bt: 1 li; sti she, tru. 9—15 i.
- 18 *sagitta'tum*, O. w. J. ☼. s 8: styles 3 or 1: f hd: st pk curved cil.
- 19 *arifolium*, O. r-w. Ju. ☼. s 6: styles 2 or 1: st pk, l ar. 2—4 f.
- 20 *convol'vulus*, O. w. r. Ju. ☼. s 8: styles 3: 1 ol, hr: st tvi, an.
- 21 *scandens*, O. w. r. Au. 2f. s 8: styles 3: 1 br-cor: sti tru, na, st cli.
- 22 *cilino'de*, Ju. ☼. s 8: style 3: 1 cor: sti sub-a, at base cil: st an, prt, cli: di of c ot ke.
- 23 *fagopy'rum*, r-w. Ju. ☼. s 8: styles 3: r pn: 1 hr-sagittate. 1—2 f. E.
- 24 *oriental'c*, r. Au. ☼. s 7: styles 2: 1 o: st e, tall: sti h. 3—6 f.
- 25 *hirsutum*, w. Ju. ☼. s 8: styles 3-cleft; sk fi: st sti hir: 1 ln. 2 f. S.
- 26 *polygamum*, w. Au. 2f? s 8: styles 3: sk pn: f sl: di of c ob: 1 spv sti en, tru. 6—8 i. V. *articulatum*?
- 27 *fimbriatum*, w. Au. 2f? sk pn: f sl: sti tru, fringed: 1 li, a end. 2 f.
- 28 *setaceum*, w. Ju. s 8: styles 3-cleft: pd lg, hir: sti hir, cil. 1—2 f.
- 29 *gracile*, g-w. ☼. die, gl: r fi: f lg pd: pd jt c: 1 spt-li, ot. 1—4 f.
- POLYM'NIA. 17—4. 55. Polymuia, one of the Muses. Leaf-cup.
- 1 *canadensis*, w. or y. J. 2f. v: 1 dte, ac: lower pnt, up 3-lo en. 2—3 f.
- 2 *uceda'lia*, y. Ju. 2f. 1 op, 3-lo, a, de into pe: lo sin-an. 3—5 f.
- POLYPO'DIUM. 21—1. 5. Gr. *polūs*, many, and *pous*, foot. Polypod.
- 1 *vulgare*, O. Ju. 2f. fr pnt: di ln-li, ot, cre, apx, up sml. 8—12 i.
- 2 *hexagonop'terum*, Ju. 2f. fr 2-pnt, so: lower di deflexed: subdi ln, ot, cil, un l gh cre, of up en; lowest adnate-de: fru-dots sl. 12 i.
- 3 *connee'tile*, Ju. 2f. fr dnt, cil; di op, adnate: subdi sm ov: stipe ch. 12 i.
- 4 *dryopteris*, Ju. 2f. fr ter, 2-pin, sub-rigid; di ot, sub-en. 8—12 i.
- 5 *virginianum*, Ju. 2f. fr pnt; di ln, ot, en apx; up sml: fru dots sl. S.
- 6 *incanum*, O. Ju. 2f. fr pnt; di al, li, en, ot; up sml, scaly be, fru sl.
- POLYPO'CON. 3—2. 10. Gr. *polūs*, many, and *pōgon*, beard.
- 1 *racemosus*, Au. 2f. pn conglm, int: brs of c sca: co unarm, h at base.
- POLYPRE'MUM. 4—1. 46. Gr. *polūs*, many, and *premnōn*, shoot.
- 1 *procumbens*, O. w. Ju. ☼. st fur, mr of fur sharp-sr, dic ab: 1 op, li, ss, sr, sub-de. 6—12 i. S.
- POLYP'TERIS. 17—1. 55. Gr. *polūs*, many, and *pteris*, wing.
- 1 *integrifolia*, 2f. st e, sub-sca, brh ab: 1 al, en, ln-li, sca. 3—4 f. S.
- POLYTÆ'NIA. 5—2. 60. Gr. *polūs*, many, and *tainia*, fillet.
- 1 *nuttallii*, 1 three-par at top, seg 3-cleft, wd at base, 1 ln, to at apex.

POMA'RIA. 10—1. 93. Lat. *pomum*, an apple.

1 *glandulosa*, y. h. brh, gld pte: brh sub-pu: 1 bipin; 1 o, oblique at base, en, ss, sub-pilose, so green ab. S.

PONTEDE'RIA. 6—1. 17. Julius Pontedera. Pickerel weed.

1 *cordata*, O. b. Ju. 2f. 1 hr-ol, ot: sk my-f, cp: di of co ol. 1—2 f.

2 *lancifolia*, b. J. 2f. 1 ln-ol: f sk. S.

POP'ULUS. 20—8. 99. Lat. *populus*, the people's tree for walks. Poplar, balm of gilead 4. Lombardy 9.

1 *trcmuloides*, Ap. h. 1 hr-rd, ac; to-sr, g, pu at mr, two gld at base, up side; pe cp, young state silky. 20—30 f.

2 *gran'didentu'ta*, Ap. h. 1 rd-o, a, uneq sin-to, g; in young state v: pe cp. Var. brh pnd. 40—50 f.

3 *bctulifolia*, Ap. h. 1 rh, lg-ac, dn, g: young brh pilose. 30—40 f.

4 *angulata*, O. Ap. h. 1 o, ac, ot to, g; br-cor young: brh wi-an. 80 f.

5 *balsamifera*, Ap. h. 1 o ac, cp sr, net-ve be. 70—80 f. Resinous.

6 *candicans*, Ap. h. 1 cor, o, ac, ot uneq sr, sub-3-n, net-ve. 40—50 f.

7 *loevigata*, Ap. h. 1 rd o, deltoid, ac, sub-cor, uneq sr, g, gld at base; pe cp: young brh an. 70—80 f.

8 *heterophylla*, M. h. 1 rd-o, cor au ot to; young d. 70—80 f.

9 *dilatata*, Ap. h. 1 g both sides, ac, sr, breq to lg: brh e. 40—80 f. E.

10 *gracca*, Ap. h. 1 cor-o, ac, os sr. pe cp. 20—40 f.

11 *monilifera*, Ap. h. 1 sub-cor-deltoid, g gld at base, cr, sub-pilose, sr; n spr: pe cp ab; old brh t. 60—70 f. S.

PORCEL'IA. 12—13. 76. Porcel. Custard apple.

1 *triloba*, p. Ap. h. 1 so, ol-wd-ob: outer pt or: fru lr, fleshy. 30—40 f.

2 *parviflora*, g-p. M. h. 1 wd-ob, m, un surface brh pu: outer pt twice lg as c. 2 f. S.

3 *pygmaca*, Ap. h. 1 lg-li, wd, ot, cr, brh g: pt ob-ol, lr c. 6—18 i.

4 *grandiflora*, y-w. Ap. h. 1 wd-ob, ot, un surface brh pu. 18—24 i.

PORTULAC'CA. 12—1. 86. Lat. *porto*, to carry, and *lac*, milk. Purslane.

1 *olcracca*, O. y. J. 1 wd: f ss.

2 *pilosa*, 1 sb, al: ax pilose, f ss, tm. S.

POT'AMOGE'TON. 4—4. 7. Gr. *potamos*, river, and *geiton*, neighbor. Pond-weed.

1 *natans*, O. g. J. 2f. 1 lg-pe, ln-ov; sub cor, floating.

2 *fluitans*, g. Ju. 2f. 1 lg, li; upln, n, cr; all pe.

3 *heterophyllum*, g. Ju. 2f. up l pe, ov, ta both ends: un crd, ss, li.

4 *diversifolium*, O g Ju 2f up l op, ln, 5-n, sh-pe: un ss, al, fi: sk ax, al.

5 *perfoliatum*, g. Ju. 2f. 1 hr-o, cls: sk tm, ab water: f al. L immersed.

6 *lucens*, O. g. J. 2f. 1 lr, ln, sub-ss, middle rib thick: sk lg, cy: pellucid mem. Sk 1 to 2 i lg, pd, 3 lg.

7 *crispum*, r-g. J. 2f. 1 al, or op, ln-ov, sr: sk few-f.

8 *pectinatum*, g. J. 2f. 1 lg-brs, apx, 2-ranked, she at base: sk tm, int wr.

9 *gramin'cum*, O. g. Ju. 2f. 1 li, al, ss: sti br: st t, sub-dic.

10 *compressum*, g. Ju. 1 or 2f. 1 li, ot: st cp: sk sh, 4 to 6 f.

11 *zosterifolium*, g-y. Au. 2f. 1 al, li, ss: st fl, cp, sub-alate, brh ax: sti ln-li, a: sk my (20-40) f. 2—3 f.

POTENTIL'LA. 11—13. 92. Lat. *potentia*, power. Cinquefoil. Five-finger. Goose five-finger 15.

1 *tridentata*, w. Ju. 2f. as, so: sti sb: 1 wd-ol, 3-to at end. 5—10 .

2 *emarginata*, 2f. hir: sti o, en: 1 ter; 1 ss, apx: pd few, tm, el, 1-f: pt wd-ol: em, twice lg c.

- 3 *nivea*, y. Ju. 2f. as tom: sti o, en: lss, apx, gh-to, hir ab, tom: pd few.
 4 *villosa*, 2f. s-v: sti br, mem, en: lss, apx, shining cp h ab, hoary-tom be: pd sh: pt obcor, lg c. As.
 5 *hirsuta*, w. Ju. 2f. e, si, hir: sti ln, en: l ob, gh par: pn few-f: pd sh.
 6 *norvegica*, O. y. J. ☼. e, brh, h: sti o halved; to: l ln-rh. 8—18 i.
 7 *canadensis*, O. y. M. 2f. prt, sub-ram, silky: sti o, gh: l wd-ob, gh-to: st as crp, hir: pd sl, el: di of c ln-li: pt or, sub-cn, lg c. 2—18 i.
 8 *simplex*, y. M. 2f. e, si, hir: sti gh: l ol-ov, to, up ss: pd ax, sl cl, 1-f.
 9 *sarmento'sa*, y. M. 2f. st s: l q: l ob, ot, sr, g ab, hir be: pt rd, lg c.
 10 *opaca*, y. Ju. 2f. dc, fi, hir: sti li-ol, en: rad l in 7s & 5s, wd-li, dt: pd ax, sl, 1-f: pt re, lg as c.
 11 *dissecta*, 2f. e, brh, g: l q: l pnt; di en, a: f tm, sub-cmb.
 12 *argentea*, O. w. y. Ju. 2f. st prt as, sub-e, brh, white-d. 4—10 i.
 13 *recta*, y. J. 2f. ste: l in 57; l ln, to: pt ob-cor, lr c: co lr. Pale.
 14 *fruticosa*, y. J. 5. fru, hir: sti o, en: l q-pnt; l li-ol, en. 1—5 f.
 15 *anserina*, O. y. J. 2f. crp: l int pnt, l nm, gh sr, silky, d be: pd sl.
 16 *pennsylvanica*, y. Ju. 2f. e, soft, sm whitish-v: l pnt; l ol, ot, sub-pnt: pn my-f: di of c ov.
 17 *supina*, y. J. ☼. prt, dic: l pnt; l ol, tc: pd lt, sl, 1-f, spr.
 18 *leucophylla*, e: l pnt di; l ol, sr, white both sides: sti ln, a, en 1-to: flax-cmb: di of c ln, cn, nr bt: rec pilose: pr so. 15 i.
 19 *humifusa*, y. M. l dg q: l wd-ol, ot, gh-to, white tom be. 4—5 i. S.
 POTE'RUM. 19—13. 92. Gr. *poterion*, beverage. Burnet.
 1 *sanguisor'ba*, J. 2f. st sm an, unarm: l pnt: l sr: f in hd. E.
 PRENAN'THES. 17—1. 53. Gr. *prēnēs*, drooping, and *anthos*, flower.
 • White lettuce.
 1 *alba*, O. w. p. Au. 2f. rad l an, to, sm lo; cau rd o, to, pe; up ln. 1—3 f.
 2 *serpentaria*, p. Au. 2f. l to, rough; rad pal: cau lg-pe, sin pnt. 3—4 f.
 3 *altissima*, p-y. Au. 2f. st brh: l pe, 3-lo, an, dt; mr sca: r ax: f no: c 5 f. 4—8 f.
 4 *cordata*, w-y. Au. 2f. st pn ab: l pe, cor, to, cil; f ss, ol, en. 4—6 f.
 5 *virgata*, O. w-p. Au. 2f. g: st si: l all ly-sin: brh sm 1-sided. 3—6 f.
 6 *crepidinea*, l br-ln, at base, uneq to-au: pn fas, tm, few-f, no: c hir, 10-12-cleft, 20-f. 4—6 f.
 7 *rubicunda*, 2f. l cil, rad hast-an, sub-en; can ob, ta base, an. 18 i.
 8 *racemosa*, st si: l undi, so; rad ln-ov; cau cls: r ol, hir; fas no. 9 f.
 9 *deltoidca*, p. st si, g: l deltoid, ac, a-dte, sub-gl be: r ax, few-f. 2 f.
 10 *pauciflora*, st brh, fl, pn ab: brh l-f: fe: l ln-li, run, g: c 5-f.
 11 *tennifolia*, st brh, g: l li, en: pu lax, tm: fe: c 5-f.
 12 *simplex*, p. Ju. st si: up l ln-li, en; rad ln, sin: r tm, si. 2 f. S.
 13 *illinoensis*, st si. l rough. all undi, ln-ov: r lg; fas sub-ss, e, hir.
 14 *aphylla*, p. r. 2f. st sub-si; brh vigrate: rad l li; cau sml, sb, sc: f sl: c 8-cleft, my-f. 2 f. Is this a variety of next.
 15 *junca*, 2f. st brh, g: cau l rt, sb, sh: brh l-f: c 5-cleft, 5-f; l mem mr.
 PRIMULA. 5—1. 35. Lat. *primus*, first. Primrose. Oxlip.
 1 *farinosa*, r. 2f. l ob-spt, cre-dn gl be: u e, my-f; pd spr. 6—10 i.
 2 *mistasinica*, 2f. sml, g: l ov-spt, sub-dt: sep el: u few-f; co rx.
 3 *angustifolia*, p. l ln-ov, en, g: sep l-f: di of co o, en. 1—2 i.
 4 *acaulis*, 2f. l rg, to, hir be: sep l-f. E.
 5 *veris*, r-y. 2f. l rg, to: limb of co concave; neck of tube ol: c inf.
 6 *clatior*, w-y. 2f. l rg, to, hir: limb of co flat; neck of tube hem: f na,
 7 *auric'ula*, 2f. l sr, ob; sep my-f; c mealy.

PRI'NOS. 6—1. 95. Scarlet berries. Winter berry, false alder.

1 *verticillatis*, w. J. \dot{h} . l deciduous, ov, sr, ac, pu be: fas of s f ax, u; p f ag; Var. l ob, mem, so be: p f 4-5-cleft, sub-sl. 4—8 f.

2 *glaber*, Ju. \dot{h} . l wd-ln, cr, g, shining, sub-dn ab: pd ax, sub-sl. 3—4 f.

3 *lævigatus*, Ju. \dot{h} . l ln, cp, sr, ac, g both sides, up side pu at n be: p f ax, sl, sub-ss; s f sc; 6-cleft. 6—8 f.

4 *ambiguus*, w. Ju. \dot{h} . l ov, ac at both ends, m-sr, sub-pu be. 3—5 f.

5 *integrifolius*, \dot{h} . l ov, en, m, pe, g both sides: p f sl, lg-pd. S.

6 *lanceolatus*, J. \dot{h} . l deciduous, ln, rt sr, a each end, g both sides: p f sc, in pa, pd, 6-cleft: s trian.

7 *coriaceus*, \dot{h} . l br-ov, a, sr ab, pnt be: f sl, 8-par; s octan. 5—6 f.

PROS'ERPINA'CA. 3—3. 88. Proserpina. Mermaid-weed.

1 *palustris*, g. Ju. \odot . l li-ln, sr ab, pnt below.

2 *pectinata*, g. Ju. \odot . l all pectinate-pnt.

PROSO'PIS. 10—1. 93. Gr. *prosopon*, face.

1 *glandulosa*, \dot{h} . sp cy-conic: l pnt, in one pa; l 6-7-p, li, ot, g, sub-cr: pe l gld: le straight: sk cy.

PRUNEL'LA. 13—1. 42. *Breune*, a disease in the throat. Heal-all.

1 *vulgaris*, heal-all, O. J. \dot{h} . l pe, ol-o, to at base: lips of c uneq; up tru, awned: st as. 6—12 i.

PRU'NUS. 12—1. 92. Gr. *proune*, plum. Cherry, plum.

1 *virginiana*, O. w. M. \dot{h} . r e, el: l ov-ol, uneq sr, g both sides. 30—60 f.

2 *serotina*, O. w. J. \dot{h} . f in lax r: l ov, sh-ac, a sr: midrib b each side base: pe 2 gld. 10—20 f. Choak-cherry.

3 *canadensis*, w. \dot{h} . f in r: l w gld, br-ln, rg, sr, pu both sides, ta pe.

4 *obovata*, w. M. \dot{h} . r spr: l ob. a, sharp-sr, g. The serotina, Ph.

5 *pennsylvanica*, w. M. \dot{h} . f sub-cmb; pd el: l ov-ol, ac, dnt, so: pe with 2 gld: brh pnt. 8—12 f.

6 *pygmæa*, O. w. M. \dot{h} . u ss, few-f: l ov-o, a, g both sides. 2—4 f.

7 *americana*, O. w. M. \dot{h} . sm thorny? pd 3-5: sti se, com: l ol-ov ob, ac, 2-sr: fru sub-o, sl, cr skin. 12—15 f. Meadow plum.

8 *chicasa*, w. M. \dot{h} . brh g, sm thorny: l ol-ov, a ac, sr: buds each 2-f.

9 *pubescens*, \dot{h} . u ss, ag, few-f: pd c pu: l sh-ov, sr. 2—3 f.

10 *maritima*, w. M. \dot{h} . pd sub-sl: l o-ol, ac, 2-sr.

11 *pu'mila*, w. M. \dot{h} . u ss, few-f: c a: brh t: l nr-ln, sr ab. 2—3 f.

12 *depressa*, w. M. \dot{h} . u few-f: c ot: brh an, prt: l wd-ln, rt sr, g, gl be: fru o. Is this a variety of *pumila*?

13 *susquehanna*, w. M. \dot{h} . pd sl: l ob-ol, gl be, sr, en at base.

14 *mollis*, \dot{h} . brh, l pd pu: u ss, 2-3-f: l o, ac, 2-to-sr: sti se, dt.

15 *littoralis*, w. M. \dot{h} . u crd, few-f: pd c sub-pu: l ov, a, sr, ve pu un.

16 *cerasifera*, w. \dot{h} . pd sl: l ov, g: fru pnd: brh thornless.

17 *spinosa*, \dot{h} . pd sl: l ln-ov, pu be: brh thorny. E. Sloe.

18 *cerasus*, w. r. \dot{h} . u sub-pd: l ln-o, g, conduplicate. Cherry.

19 *padus*, w. M. \dot{h} . f r, lax: l 2-sr, sub-rg, pe, 2-gld.

20 *avium*, w. \dot{h} . u ss: l ln-o, pu be. Conduplicate. Bird cherry.

21 *domestica*, w. M. \dot{h} . pd sub-sl: l lu-o: brh thornless. Plum.

22 *caroliniana*, w. Ap. \dot{h} . f r: l ln-ol, m, sr en, gld so. S.

23 *semperflorens*, \dot{h} . r l, pnd: c sr: l o, sr, g, gld at base.

24 *hirsuta*, Ap. \dot{h} . l ov, sr, w gld? un surf, c, pd pe hir. 3—4 f.

25 *umbellata*, w. M. \dot{h} . u tm, my-f: l ln, sub-ac, sr, g, with 2 gld at base: c pu.

PSAM[']MA. 3—2. 10 Gr. *psammos*, sand.

1 *arnaria*, Au. 2f. pn sk c a: co thrice lg as ch: l inv. 2—3 f.

PSILO[']TUM. 21—1. 5. Gr. *psilos*, naked.

1 *triquetrum*, J. 2f. st na, dic, brh 3-an. S.

PSORA[']LEA. 16—10. 93. Gr. *psoraleos*, scnrfy. Bread-root.

1 *esculenta*, b. J. 2f. v: l q; l ln, uneq; flat, en: sk ax, densc-f: di of c ln, sh co: le ensi, beak: ro fu. 12—18 i.

2 *incana*, b. Ju. 2f. silky-tom: l q ter; l ln-ol: sk tm, int: bt o, ac: f op ss. 12 i.

3 *physodes*, g: l 3, 5 pa, br rh-o, a, m, gld, tm lg-pe: r pd, lax, ax, lg l.

4 *lanceolata*, w-b Au. 2f. sub-pu: st e, brh: l ter; l ov ln-ov, ot, sub-m: pd lg l: sk capitate, my-f: bt caducous: teeth c sml, ot. 1 f.

5 *latifolia*, J. 2f. l ter; l br-o, ac, g, cil on mr: tm lg-pe: pd ax: sk lax-f, el: bt caducous: c g: teeth a. 2—3 f.

6 *canescens*, y. J. 2f. l ter, sh-pe, br-ln: sk lax-f: f pd. 2—3 f. S.

7 *tenuiflora*, b. S. 2f. pu, brh: l ter; l ov, rg-pnt both sides: pd ax. 2 f.

8 *lupinella*, p. J. 2f? g: l digitate, lg-pe; l fi: r my-f, lg l: le rg. 2 f.

9 *longifolia*, 2f. silky-v: l ter; l lg-li: sk ax, pd lax-f, sh l.

10 *cuspidata*, 2f. v: l q; lob, m, en: sk ax, dense: di of c bt o, pte.

11 *onobrychis*, st so, l ter; l ln-o, sub-pu: r ax, lg-pd: f l-sided: le sub-o, in, so. 3—5 f.

12 *virgata*, b. 2f. st sub-pu: l si, ln-li: sk ax, sh l. 2 f.

13 *melilotoides*, p. J. 2f? sub-pu: l ter; l ln-ol: sk ol: bt br-cor, lg-ac: le rd, n, rg. 1—2 f.

14 *eglandulosa*, pJ. 2f. pu, w gld: l ter, ln-ol: sk ol: bt br-ln, lg ac, c v.

15 *multijuga*, p. J. st brh: l pnt; l nm, (9-10 pa,) ln-ol, ot, pu. 1—2 f.

16 *jamesii*, l ter; l ob, ot, wd at base, en both sides silky: pe pu: sk capitate: bt ol, ac: c hir: teeth sb, eq. 4 i.

PSYCHO[']TRIA. 5—1. 57. Gr. *psuchos*, cool, *otruno*, to excite.

1 *lanceolata*, h. brh l red-h be: l ln, ac at both ends: sti cls, rd caducous: cmb tm, 3-forked at base. S.

PTE[']LEA. 4—1. 94. Gr. *ptela*, elm.

1 *trifoliata*, g-w. J. h. l ter; f pn, die. Var. l q 6—8 f.

2 *mouophylla*, l si, ln-o: sub-ss: fru 3-winged. S.

PTE[']RIS. 21—1. 5. Gr. *pteron*, or *pteruz*, a wing.

1 *aqualina*, O. Ju. 2f. fr pnt, 3-par: brh 2-pnt, l ln-li, ot-pnt, to; fer brh pnt, l pnt; di a, all cil.

2 *atropurpurea*, O. Ju. 2f. fr pnt: lower l ln, ot, ter or pnt; at base ot tru sub-cor. Var. l ve be: stipe an. 3 to 10 i.

3 *punctata*, l pte be: stipe t. 3—10 i.

4 *gracilis*, Ju. 2f. fr pnt: l ln, ot, al, ss; lower pnt; fer en; bar cre. 4 i.

5 *caudata*, Au. 2f. fr 3-par pnt: brh 2-pnt: l li, el, ot, en; lower pnt: fer brh pnt: l rt below, base pnt-to.

6 *pedata*, Ju. 2f. fr 5-lo-pal; lo pnt; di ln-li, a. 6 i. S.

PTEROCAU[']LON. 17—2. 55. Gr. *pteron*, a wing, and *kaulos*, a stem. Black root.

1 *pycnostachya*, w. Au. 2f. st wi: l ln, tom be, en: sk cy. S.

PTEROSPO[']RA. 10—1. 51. Gr. *pteron*, a wing, *spora*, a seed. Albany beech-drops.

1 *andromeda*, r-y. Ju. ☼. sep tall, my-f-r: f lt and tm, no, bt: 1—3 f.

PULMONA[']RIA. 5—1. 43. Lat. *pulmones*, the lungs. Lung-wort 4.

1 *virginica*, b. M. 2f. so: st e: c sh tube of co: rad l ol-ob, ot; cau nr.

- 2 *paniculata*, b-w. J. hir, e; l o-ol, ac: f pn: c sh: 5 par.
 3 *alpina*, J. b. 2f. g: st si: l spt-o: lower a; up ac, pilose ab. 6 i.
 4 *officinalis*, lung-wort. b. M. ♂. rad l hr-o, hir: f r. E.
 5 *lanecolata*, b. w. 2f. g, e: rad l lg-pe, ln; cau li-ol: f pn: c sh. S.
 6 *ciliata*, b. g, e? l ln-o, cil on mr: f fas-pn, pd; co bl: c sh, 5 par. 1 f.
 PU'NICA. 11—1. 92. Lat. *puniceus*, Carthaginian.

1 *graud'tum*, h. l ln: st woody. E.
 PYCNANTHEMUM. 13—1. 42. Gr. *puknos*, dense, and *anthos*, flower.
 Basil, mountain mint.

- 1 *iuca'num*, O. w. r. Ju. 2f. l ol-o, a, sub-sr, d, f in com hd. 1—3 f.
 2 *aristatum*, w. Au. 2f. l ln-o, sub-sr, sh-pe, sm d: hd ss, tm, bt awned.
 3 *linifolium*, w. Ju. 2f. g: l li, 3-n, en, pte, a; hd tm, sub-cmb. 1—2 f.
 4 *virginicum*, O. w. J. 2f. pu: l ss, ln-li, entire, pte: hd tm. 12—18 i.
 5 *mutieum*, w. Ju. 2f. l ln-o, sub-dte sub-g: hd tm: bt ln, a. 18—24 i.
 6 *verticillatum*, w. J. 2f. l ln-o, en or rt sub-dte, pu, bt ac. 18—24 i.
 7 *montanum*, p. 2f. l ln-ov, sr, sub-ss, hd ss: bt cil, ac: c e, sh te. 1 f.
 8 *monardellum*, w-r. Ju. 2f. pu: l pe, sub-cor-ov, sr, bt lr, cl, c b. 2—3 f.
 9 *nudum*, g: st si: l ol-o, en, ss: hd pd, few-f, na: s ex. 2 f.
 10 *pilosum*, l ss, ln, tom be, os to: hd lr, tm: ln-o, bt, c, tom. 18—24 i.

- PYROLA. 10—1. 51. Lat. *pyrus*, pear. Pear-leaf. Shin-leaf.
 1 *rotundifolia*, O. w. J. 2f. p re: l rd or br-ov, os sr, sub-cr. 6—12 i.
 2 *elliptica*, w. J. 2f. p re: l mem, ol-ov or o, sr, a: l lg pe. 6—10 i.
 3 *asarifolia*, g-w. Ju. 2f. p re: l sub-ren, em, cr, lami sh pe. 6—8 i.
 4 *deutata*, p re: l ob or ov, ve, rt and ot to: scp straight, an, na. 6 i.
 5 *picta*, style declined: l o, sub-sr, fleshy, brh ve and spotted.
 6 *aphylla*, scp l-less, scaly mem: scp an, p re.
 7 *minor*, w-r. Ju. style straight: l rd-ov, sr: scp sub-na: sk f reversed.
 8 *secunda*, O. g-w. Ju. 2f. style straight: l rd-o, a, sr, r l-sided. 6—8 i.
 9 *uniflora*, J. 2f. style straight: l sub-or, cre-sr: scp l-f.

PR'US. 11—5. 92. Lat. *pyrus*, pear, Celtic, *peren*. Apple 4. Pear
 3. Quince 5. Crab 1.

- 1 *corouaria*, O. w-r. M. h. l br, base rd, sub-an or sub-lo, sr, so, cmb.
 2 *augustifolia*, h. l ln-ol, at base a: slightly cre-to, shining. pd cmb.
 3 *commu'nis*, w-r. M. h. l o, sr: pd cmb. V. *pyraster*, dwarf. V. *falerna*,
 burgamot. V. *pompeiana*, good christian. E.
 4 *malus*, w-r. M. h. fin ss u: l o-ol, ac, sr, g: claws of pt sh c: styles
 g. V. *sylvestris*, wild apple. V. *prasomila*, pippin. V. *castanea*,
 chesnut-apple. V. *apiosa*, ape-apple. V. *carillae*, cornered apple.
 5 *cydonia*, w. J. h. f sl: fru tom: l o. en.

Remark. The varieties into which the above species have been extended by culture, are very numerous. I have given those only which are set down by Persoon as the most distinct.

QUER'CUS. 19—12. 99. Celtic *quer*, excellent, and *euez*, tree. Oak.

- 1 *phellos*, M. h. l ln-li, ta to both ends, en, g, m. 30—60 f.
 2 *imbricaria*, h. l ol, a at both ends, m, pu be: c saucer-form. 40—50 f.
 3 *heterophylla*, M. h. l lg pe, ln-o or ol, en, uneq to: c hem.
 4 *agrifolia*, h. l rd-o, snb-cor, g sides, rt sp-to: c hem: acoru o-a.
 5 *trilobla*, h. l wd. ol, a at base, sub-3-lo at apex: lo eq, m. 20—40 f.
 6 *aquatica*, h. l wd-o, g, en: apex 3-lo, intermediate lo lg: 30—40 f.
 7 *nigra*, h. l cr, wd, sub-cor at base, spre-3-lo at apex: young state m.
 8 *tinctoria*, O. M. h. l ob, ol, sin, pu be: lo ol, ot, ot dte. 60—70 f.
 9 *discolor*, O. M. h. l ol, sin-pnt, pu be: lo ol, to, se. 60—70 f.
 10 *coccin'ea*, O. M. h. l lg-pe, ol, sin, g: lo div, to, a, se-m: c scales.

- 11 *ambigua*, *h.* l sin, g, a base: lo sub-a: c saucer-form, acorn turgid.
 12 *rubra*, O. M. *h.* l lg-pe, ol, g, ot sin: lo a, to, se-m. 70—80 f.
 13 *catesbaci*, *h.* l sh pe, wd at base, ol, cr, g, sin; lo div-a. 15—30 f.
 14 *falcata*, *h.* l lg-pe at base, ot, d be, 3 lo or sin: lo sub-fal. 70—80 f.
 15 *palustris*, O. M. *h.* l lg-pe: ol, sin, g; ax of ve v be. 40—60 f.
 16 *ilicifolia*, O. M. *h.* l lg-pe, wd-ob, 4 or 5-lo, mr en, d be. 2—9 f.
 17 *obtusiloba*, *h.* l ol, sin, wd at base, pu be: lo ot, up di 2-lo. 30—50 f.
 18 *macrocarpa*, *h.* l d be, ly-sin-lo; lo ot, re, up dilated: c fringed.
 19 *olivaformis*, O. M. *h.* l ol, g, gl be, uneq sin pnt: c fringed.
 20 *alba*, O. M. *h.* l ol, sin-pnt, pu be; lo ot, en, nr at base. 70—80 f.
 21 *prinos*, M. *h.* l lg-pe, ob, a, pu be, to; eq, spr, cr at apex, c ta.
 22 *chin'quapin*, O. M. *h.* i sh-pe, ob, at base a, to, gl be, cr tip. 3—4 f.
 23 *montana*, M. *h.* l pe, br ob, ol, d be, g ab; base to. 30—40 f.
 24 *castanea*, M. *h.* l lg pe, ln-ol, ot base, ac, d be, to. 60—70 i.
 25 *bicolor*, *h.* l sh pe, ol-ob, white-d be, to, en at base, fru pa. 60—70 f.
 26 *maritima*, Ap. *h.* l cr, ln, en, g, ta at base, a at apex, c pd. 4—10 f. S.
 27 *pu'mila*, Ap. *h.* l ln-ol, gab, tom: a, m at apex. 2 f.
 28 *myrtifolia*, *h.* l cr, sml, ol-o, unawn, a, g ab mr rc.
 29 *virens*, O. M. *h.* l cr, ol-ov, en, rev mr, at base ot, at apex a. 40—60 f.
 30 *cinerea*, Ap. *h.* l cr, ln-ol, en rc mr, m at summit, tom be. 20 f.
 31 *laurifolia*, Ap. *h.* l g, ss, ln-ol, sub-a, ta at base, en. 40—50 f.
 32 *hemispherica*, *h.* l ln-ol, undi, 3-lo, sin; lo m: g both sides.
 33 *nana*, M. *h.* l wd, g, 3-lo at top, sub-sin at base; lo div, m ve pu.
 34 *lyrata*, Ap. *h.* l ol, sin, g; lo ol, sub-a; up br, an. 60—70 f.
 35 *micauxii*, Ap. *h.* l pe, ob, ot at base, uneq to, sin, tom be. 50—60 f.
 36 *undulata*, *h.* fru, brh: l sh-pe, ol, ot, cr, re-to, eq base, tom be, g ab.
 QUER'IA. 5—1. 30. Don Joseph Quer. Fork chickweek.
 1 *canadensis*, O. w. Ju. 2f. st dic, brh, spr: l ov, ln, g, e. 6—8 i.
 2 *dichotoma*, O. S. 2f. ces, pc, g: l li, a, 2 groves each side. S.
 3 *herniarioides*, Ju. 2f. prt, all pu: l ol-ov, cil, m: di of c sb, spr, se.
 4 *argyrocoma*, 2f. ces, pc: st pu: l li, a, sub-pilose: hd fas, tm.
 5 *sessiliflora*, Ju. ces, brh: l g, short, li, rfa: sti sb eq l: f tm, ss.
 RACORD'IUM. 21—6. 1. Gr. *rakos*, a rag.
 1 *xylostroma*, br soft, yellow, spr among cleavages of wood.
 RANUN'CULUS. 12—13. 61. Gr. *rana*, a frog. Crow-foot.
 1 *lingualis*, y. Ju. 2f. h c-p: l ln, sub-dt, ac, sub-ss: st e, my-f.
 2 *flammulus*, y. Ju. 2f. g st pnd: l nr ln, a, en, dnt, lower pe. 1—3 f.
 3 *pusillus*, y. Ju. 2f. g: l pe: lower o, to; up ln-li, bt: pd al. 6—12 i.
 4 *filiformis*, w-y. J. 2f. g, sml: st fi, crp, 1-f: fax, pd: pt 5—8.
 5 *cymbalaria*, w-y. J. 2f. g, sml, fi, crp, ro at jt: l hr-ren, cre-dn.
 6 *glaberrimus*, l all pe; rad rd, en to; cau wd 2-fid: pt lg c.
 7 *abor'tivus*, O. y. M. 2f. g: st striate, na below: rad l hr-ren, ot cre.
 8 *scelcratus*, O. y. J. 2f. g: lower l pal, up ss dg: fru ol. 12—18 i.
 9 *auricomus*, y. M. 2f. pu: rad l ren, 3-par, gh-cre; cau ss, li: st my-f.
 10 *pygmaeus*, y. J. 2f. sml, g: rad l sub-cor-ren, gh-to; cau ss; di li.
 11 *pennsylvanicus*, y. Ju. 2f. st pilose, e, brh: l ter, 3-cleft. 1—2 f.
 12 *fascicularis*, O. y. M. 2f. pu: up l sub-li; rad ter or sub-pnt. 6—10 i.
 13 *bulbosus*, y. M. 2f. hir: l ter, 3-cleft, gh to: st e, my-f. 1—2 f.
 14 *hirsutus*, y. Ju. 2f. hir: l ter: st e, my-f: pd sulcate: c rx, ac.
 15 *rep'ens*, y. M. 2f. sub-pu: l ter; l wd, gh-to, 3-lo, st prt.
 16 *prostratus*, y. M. 2f. l ter, 3-cleft, h, h c-p; up l ln: st pt, crp.
 17 *acris*, butter cup. O. y. M. 2f. b c-p: l 3-par, my-cleft, up li. 1—2 f.

- 18 *lanuginosus*, y. J. 2f. hir: l 3-cleft, lo, to, silky: pd el, t, c spr.
 19 *ovalis*, pu: rad l cor, tru base, ov, en, split cre; cau sub-ss, dg.
 20 *affinis*, rad l dg-my-cleft, pe; cau sub-ss; lo all li: st e, 1-2-f.
 21 *rhomboidens*, hir; rad l rh, undi, sr; cau pal; f di: c spr, h.
 22 *marylandicus*, w-y. 2f. pu: st si. sub-na: rad l ter; l 3-lo; lo a, gh.
 23 *recurvatus*, y-w. J. 2f. pu: l 3-lo, wd at base. gh at apex, a. 1-2 f.
 24 *hispidus*, w-y. J. 2f. hir, e, sm brh: l ter; l a lo: st few-f, c cp. 1f.
 25 *aquat'ilis*, w. Ju. 2f. l cap; emersed peltate, submersed, cap.
 26 *fluvial'ilis*, O. w-y. M. ☼. st sub-mersed: l cap, dic.
 27 *multifid'us*, y. 2f. l 3-par, my-cleft; di gh, apx: st swim, pt lg c.
 28 *lucustris*, y. M. 2f. l sum al. dich di in nm cap seg, cls emm sti. 2-5 f.
 29 *nivalis*, l 5-lo. en; cau ss, digitate: st 1-f.
 30 *lapponicus*, l 3-par, lo, ot: st na, 1-f.
 31 *hyperbo'reus*, l 3-lo: lo ol, div; st fi, crp.
 32 *brevicaulis*, pu: rad l all hr-ov, en; cau cre, my-cleft, pal: st e, pt 6.
 33 *cardiophyllus*, hir: rad l rd-cor, em at base, cau my-cleft, pal; pt lg c.
 34 *eschscholtzii*, l cil, rad pe, par lo: st sm 2-f: c hir, sh pt: fru oblique.
 35 *pedatifidus*, l h; rad pe, pal or pedate, di en li lo: scp na, ex, 1-f.
 36 *orthorhyn'chus*, cp, h: st e, ram l ab: rad l pe, ter: l li-my-cleft.
 37 *natus*, st prt: l hr-ren: lo apx, os cre and to: di of c ov.
 38 *hederaceus*, Ju. 2f. st crp: l sub-ren, 3-5 lo; lo br, en, ot. S.
 39 *oblongifolius*, y. J. 2f. l pe, dt: lower ol-ov; up ln-li: st brh. 1-2 f.
 40 *utidus*, y. Ap. 2f. l 3-par; seg uneq 3-cleft, ln, gh, to, g. 1-2 f.
 41 *palmatus*, M. pilose; h c-p: l pe; rad pal; 3-par; lo dn. 12-18 i.
 42 *carolinianus*, st e, brh, pe ap-pu: l g, 3-cleft or 5-lo; lo o, sm gh.
 43 *trachysper'mus*, y. M. st, pe and l v, h spr: l 3-cleft; lo a gh. 12-15 f.
 44 *muricatus*, y. Ap. ☼. l g, pe, rd, 3-lo, to: st e or diffse. 12-18 i.
 45 *tomentosus*, y. 2f. st as, 1-2-f, v, h sbr: l pn, tom, 3-cleft; up ss, o.
 46 *septentrionalis*, y. 2f. g: l mem, g, ter; l sm 3-lo, gh, a, c rx.
 47 *echinatus*, y. g, si: l si rd, 3-lo: pt twice as lg as c.
 48 *callinus*, Ap. l all rad, pu, pe, 3-5-cleft: scp v, 1-f, lg l. 1-2 i.
 RAPH'ANUS. 14-2. 63. Gr. *ra*, quickly, and *phainomai*, to appear.

Radish. Charlock.

- 1 *raphanistrum*, y. Au. l ly: siliques t, jt, so, 1-celled. E.
 2 *sativus*, w. J. ☼. l ly: silique t, torose, 2-celled.
 RESE'DA. 12-3. 64. Lat. *resedo*, to appease. Mignonette 1. Dyer's weed 2.
 1 *odorata*, w-y. Ju. ☼. l en 3-lo: c eq co.
 2 *luteola*, y. Au. ☼. l ln, en, to each side base: c 4-cleft: f sk.
 RHAM'NUS. 5-1. 95. Gr. *ramnos*, white thorn; Celtic *ram*, tuft.—
 Dwarf alder 1. Buckthorn 2.
 1 *franguloides*, O. w-g. h. unarm: l ov, ac, sr, pu at n be: pd aggre.
 2 *cathartica*, h. therns tm: f 4-cleft, die: l o, sr.
 3 *alnifolia*, h. unarm: l ov, dt, sh-ac, sinus at base, cor, pu at n be.
 4 *caroliniana*, O. J. h. unarm: l al, ov-ol, sub-en, ribbed, g. 4-6 f.
 5 *hircolata*, h. unarm, shrubby: l ln, sr, a each end, pu be. Ber black.
 6 *minutiflora*, Oc. h. unarmed: l op, ov, sr: f minute, di sk, al ss rach.
 7 *rotundifolia*, brh g, sm twining: l ov, m, sub-undulate: f die, 5-pt.
 RHE'UM. 9-3. 28. Gr. *reō*, to flow. Pie rhubarb.
 1 *palmatum*, J. 2f. l pal, ac. E.
 3 *rhaponticum*, w. J. 2f. l hr-o, ot a, so; ve sub-pilose be: llg. 2-4 f.

RHEXIA. 8—1. 90. Gr. *rexis*, rupture. Deer-grass.

- 1 *virginica*, p. Ju. 2f. st wi:an: l ss, ln-o, cil-sr: cmb dic. 1—2 f.
- 2 *mariana*, w-r. Ju. 2f. st and l hir: l sub-pe, ln-ov or ln-li. 1—2 f.
- 3 *ciliosa*, p. Ju. 2f. st quadran, g: l sub-pe, ln-o, sr, cil, g be. 18 i.
- 4 *serrulata*, p. Au. st so: l sml, pe, rd-ov, a, so both sides. 6—10 i. S.
- 5 *glabella*, p. g: st t: l ln, o, 3-n, dt, gl: c glutinous. 2—3 f.
- 6 *stricta*, p. J. 2f. st e, wi, g, b at jt: l ss, nr-ln, ac, 3-n, g both sides.
- 7 *lutea*, y. Ju. ☼. hir: l ln-li, sm wd at base, 3-n: pn py. 18 i.
- 8 *linearifolia*, y. st t, sub-pu: l al, li, ol, ot, ss, pu both sides: f sub-sl.
- 9 *angustifolia*, w. Ju. 2f. hir: l li, ln-li: ro crp.

RHINANTHUS. 13—2. 36. Gr. *rin*, nose, and *anthos*, flower. Yellow rattle.

- 1 *crista-golli*, y. J. ☼. up lip co vaulted: c so: l ln, sr. 1 f.

RHIZOPHORA. 12—1. 91. Gr. *riza*, root, and *pherō*, to carry. Mangrove.

- 1 *mangle*, h. l a, o, op: pd ax, fru clavate-sb.

RHODODEN'DRON. 10—1. 50. Gr. *rodon*, rose, *dendron*, tree. Rosebay.

- 1 *maximum*, r. Ju. h. l ol, g be: u tm, dense: co sm bl.
- 2 *lapponicum*, Ap. Ju. h. l ellip, pt rg. 8—10 i.
- 3 *ponticum*, p. h. l ol, g, both sides cl: cmb tm: co bl: pt ln. E.
- 4 *punctatum*, r. Ju. h. l ln-ov, g, with dots be: u tm: c fun. 3—4 f. S.
- 5 *catarbiense*, r. J. h. l sh-ov, rd-ot each end: u tm: seg of c nr. 3—4 f.

RHODORA. 10—1. 50. Gr. *rodon*, a rose. False honeysuckle.

- 1 *canadensis*, b. r. M. h. l ov, en, gl-pu be. f tm u. 2 f.

RHUS. 5—3. 94. Gr. *rous*, Celtic *rhudd* or *rub*, red. Sumach. Ivy.

- 1 *typhin'a*, O. y. g. Ju. h. brh pe v: l pnt, my-pa; l ln-ol, sr. 8—15 f.
- 2 *glabra*, O. g. r. Ju. h. brh, pe and l g: l pnt, my-pa; l ln-ol, sr. 12 f.
- 3 *viridiflora*, y-g. Ju. h. g: l pnt in my-pa; l ln-ol, sr, sub-tom be.
- 4 *copallina*, y-g. Jn. h. l pnt, main pe jt-wi; l ln-ov, en. 3—12 f.
- 5 *vernix*, y-g. h. g: l pnt, my-p; l ov, ac, en: pe w wi, pn lax. 8—15 f.
- 6 *toxicodendrom*, g. Ju. h. ro: l ter; l ov, en or sin-cre: r brh, ax.

- 7 *aromatica*, y. M. h. l ss, gh-cre, pu be, middle rh, l rh-o. Amentæ.

- 8 *cot'inus*, aaron's beard. p-g, Ju. h. l si, ob, o: pn r plumose. E.

- 9 *pumila*, Ju. h. low: brh and pe pu: l ov, gh-to, tom be: fru d. 1 f. S.







RHYNCHOSPORA. 3—1. 9. Gr. *rũnchos*, beak of a bird, and *spora*, seed.

- 1 *alba*, Ju. 2f. sk cmb-fas: culm trian ab: l se: seed sm lent. 12—18 i.
- 2 *fusca*, culm 3-an: l li: fas of sk al, pd: sk o: glu o, ke. 2 f.
- 3 *glomerata*, J. 2f. sk cmb-fas, rt in pa: culm ot trian: l flat. 12—18 i.
- 4 *copillacea*, Ju. sk 3—5, tm: culm 3-an, sm l: l se: seed sti sub-rg.
- 5 *sparsa*, Ju. culm 3-an, l: cmb ax and tm, com, lax, pd cap. 18 i.
- 6 *cymosa*, Ju. culm 3-an, l: cymes tm, ax; tm lr: seed rd-o. 12—18 i.
- 7 *laxa*, culm 3-an: cmb l, dc, beaked: sk sb: seed ob, lg style. 3—6 f.
- 8 *variflora*, M. 2f. culm and l se: pn loose, few-f: seed ob, rg. 1 f. S.
- 9 *incxpansa*, Ju. culm 3-an: pn rt, pnd: seed ol, rg: brs sca. 2 f.
- 10 *fascicularis*, f fas, lt and tm: bt sh: sk ol: scales m, brs lg.
- 11 *distans*, Ju. culm 3-an: fas of f distant: seed fur: brs se. 12—20 i.
- 12 *ciliata*, 2f. sk cmb-fas, tm: bt and l ot, cil.
- 13 *plumosa*, Ju. culm 3-an: l li: f tm, crd: bt awned. 8—12 i.
- 14 *punctata*, fas lt and tm, apx at summit: seeds rg, dotted. 1—12 f.
- 15 *cadaca*, culm 3-an: pn ax, e: sk ss: seed rg: brs twice lg as seed.
- 16 *teres*, Ju. kulm t: l li: pn cyme-like, f crd: seed g: brs se. 1—3 f.

- R¹BES. 5—4. 85. Arabian name. Current, Gooseberry 11.
 1 *flo'ridum*, O. M. h. unarmed: 1 pte both sides: r pnd. 3—4 f.
 2 *albinervium*, g-y. M. h. unarmed: 1 a lo, so: n white: r re.
 3 *tri'fidum*, y-g. unarmed: 1 lo, g ab, pu be: r lax, pu: f flat.
 4 *rigens*, h. unarmed: 1 a lo, to, rg, pu be: r lax, e: ber sub-his, red.
 5 *glandulosum*, r-y. M. h. unarmed: brh prt: 1 lo, so. 2—3 f.
 6 *sanguineum*, r. p. Mar. h. unarmed: 1 cor, 3-lo, sr, g ab, tom be.
 7 *aureum*, y. Ap. h. unarmed, g: 1 3-lo; lo with few gh-teeth
 8 *laxiflorum*, y. h. unarmed: 1 cor, 5-lo, gh-to, g: r lax, e, lg as 1.
 9 *hirtellum*, g. M. h. sp sml, sub-ax: brh snb-his: 1 sml, sm 3-fid.
 10 *gracile*, M. h. sp sml, sub-ax: 1 pe, pu both sides: lo a. 2—3 f.
 11 *triflorum*, g. M. h. sp sub-ax: 1 g, 3—5-lo, gh-to: pd sub-3-f. 3-4 f.
 12 *oxyacanthoides*, h. lr sub-sl pk, sm sc: 1 g, to lo: pd sh, 2-f. 3 f.
 13 *lacustris*, g-y. M. h. sub-ax sp few: st his, 1 lo. 3—4 f.
 14 *cynos'batii*, g. M. h. sub-ax sp in pa: 1 sh-lo, gh-to, soft pu, c bl.
 15 *speciosum*, p. h. un buds 3-plaited: 1 wd-rd, gh cre, g, sh pe. 3--f.
 16 *mcnziesii*, r. p. h. un buds 3-plaited-pk: brh his: 1 tru at base.
 17 *rubrum*, g. M. h. unarmed: r g, no: co flal: pt obcor. 2—4 f. E.
 18 *nigrum*, g. M. h. unarmed: 1 pt be: r lax: f bl: bt sh pd.
 19 *grossula'ria*, g. M. h. brh pk: pe h: bt 2-l: berry g or hir. 2—4 f.
 20 *uva-crispa*, g. M. h. brh pk: ber g: pd 1-l bt.
 21 *resinosum*, g. Ap. h. unarmed, gld h: 1 3—5-lo, c flat, r e. S.
 22 *viscosissimum*, y. J. h. unarmed, viscid: 1 cor, ot 3-lo, sr, c tu.
 23 *rotundifolium*, h. sp sub-ax: 1 rd, sub-pu: 1 rd-ot: pd 1-f.
 R¹CINUS. 19—15. 96. Lat. *ricinus*, a tick. Caster oil, palma christi.
 1 *communis*, ☉. 1 pal: lo ln, sr: st hoary mealiness. 4—6 f. E.
 RIC'CIA. 21—3. 3. Ricci a botanist of Florence. Fork-stems 2.
 1 *natans*, O. Ju. fr ob-cor, apexes forming sectors of circles, flat, rad
 be flat with sh flat ro cl sea-green. 1—2 i. Floating liver-wort.
 2 *fluitans*, O. J. dic li sub-cy, so, cloven at tip, cellular. 2 or 3 ilg.
 RIVINA. 4—1. 29. Rivinus, a German botanist.
 1 *laevis*, r si: 1 o, ac, g, flat: st t.
 2 *humilis*, h. r si: f tetran: 1 pu. S.
 ROBINIA. 16—10. 93. John Robin. Locust tree.
 1 *paseudo-cacia*, w. M. h. 1 pnt, tm l: r pnd: teeth of c unawn. 30-40 f.
 2 *viscosa*, Ju. h. r 1-f pedicels: 1 pnt, tm l: brh and le viscous gld. S.
 3 *hispidia*, Ap. r. h. r sub-ax, e: c ac: st unarmed; plant his: 1 pnt.
 ROCHELIA. 5—1. 43.
 1 *virginiana*, w-b. J. ☉. pilose: 1 ln-ol, ac, sca ab: r div; seed hooked.
 2 *lappula*, b. Ju. ☉. his: seeds pk, b: 1 li-ol: st brh ab. 12—18 i.
 3 *glomcrata*, w. J. ♂. hir: seeds rg: 1 li-spt: sk pd, ax. 6—12 i. S.
 RO'SA. 11—13. 92. Celtic *rhos*, or *rhudd*, red. Rose.
 1 *blanda*, Ju. h. gm glo, pd his: 1 (7,) ol, sub-eq sr, g: pe g, sm pk.
 2 *parriflora*, O. r. w. h. gm glo: gm and pd his: pe pu, st g. 1—3 f.
 3 *nitida*, r. Ju. h. gm glo: c, pd and brh his: pe sub-pilose, 1 7, g.
 4 *lucida*, r. Ju. h. gm glo: gm and pd sub-his: pe g: st g, pk. 4—6 f.
 5 *gemella*, r. Ju. h. gm glo: gm and pd g: fsm in pa: 1 ol, a, pe pu.
 6 *carolina*, O. r-w. Ju. h. gm glo: gm and pd his, g: pe h, pk, st g.
 7 *rubifolia*, r. Ju. h. gm and pd gld-his: st so: pk sh, sl: 1 pe. 6—8 f.
 8 *rubiginosa*, r. J. h. gm o: pd and pe gld-his. pe sm pk: st g; 1 5--7.
 9 *micrantha*, r-w. J. h. gm o: gm and pd sm his: pk hooked. 4-f.
 10 *sayi*, h. gm ol-o, so: di of c e, spr at summit, v, lg gm: pd rigid.

- 11 *canina*, *h.* gm o: gm and pd g: st an pe pk: l o, g. E.
 12 *gallica*, *r. J.* *h.* gm o: gm and pd his: st and pe his-pk.
 13 *damascena*, *w. r. J.* *h.* c half-pn: gm o, brs: st and pe pk.
 14 *musco'sa*, *r. Au.* *h.* gm o: c, pd, pe and brh his, viscid.
 15 *moschata*, *h.* gm o: gm pd v: st pe pk: l ol, ac, g: pu my-f.
 15 *burgundiaca*, *h.* gm sub-glo: gm pd his: l o, pu be: co sml.
 17 *semperflorens*, *h.* gm o-ol, ta both ends: gm pd his: st pk: f e cmb.
 18 *alba*, *w. J.* *h.* gm o, g his: st pe pk: l o, v be.
 19 *pimpinellifolia*, *r. h.* gm glo: gm pd g: st sc pk: l ot: pe sca.
 20 *centifolia*, *r. h.* gm o: gm pd his: st his, pk: l pu be: pe unarm.
 21 *cianamo'mea*, *h.* gm glo: gm pd g: st sti pk: pe sm unarm: l ol.
 22 *multiflora*, *h.* gm o: gm pd unarm, v: st pe pk: l o: f sml, pn.
 23 *spinosissima*, *h.* gm glo, g: pd his: st pe his.
 24 *parvifolia*, *h.* sml: gm o, sub-g: pd gld: st pe pk: l rg, v be, o, g.
 25 *setige'ra*, *J. h.* gm glo: pe ve pk: brh g: pk pa sc: l 3-5, ac g: l c fringed brs. 5—8 f. S.
 26 *lutescens*, *y-w. J. h.* gm glo: gm pd g: brh his-sp: l 7, g, ov, ac-sr.
 27 *lacrigena*, *w. Ap. h.* gm ol, his: l ter; l ln, sr, cr: f sl tm. 5—20 f.
 28 *lyo'mi*, *r. Ju. h.* g sub-glo, g: pd his: pe sm pk: st g: pk sc: l 3-5, o ol, a, sr, sub-g ab, tom be; up si: f sm in threes. sti li.
 29 *pendulina*, *r. J. h.* unarm: gm ol: pd pe his: st brh g: tru pnd.
 ROSMARI'NUS. 2—1. 42. Lat. *ros*, dew, and *marinus*, sea-shore. Rosemary.
 1 *officinalis*, *h.* l green both sides: whitish be, li, mr rev. E.
 ROTTEOL'IA. 3—2. 10. Dr. Christian Rottboll.
 1 *dividiata*, *2f.* sk ep, li: f secund: c 2-va, 2-f: out f s: in per. S.
 2 *cilata*, culm e, tall: sk t, lg-pd: f pd secund: pd mr of rachis v. 3-4 f.
 3 *rugosa*, culm e, l: sk cy, sl, ax, px: jt of rachis so, cy: va of perf rg; f bar ein pc.
 RU'BIA. 4—1. 57. Lat. *ruber*, red. Madder.
 1 *tineto'ria*, l ln, in sixes: st pk, cli. Var. l in sixes, up in fours or pa.
 2 *brounei*, *y. 2f.* his: l in fours, ov: pd sl. 1-f: st dc. S.
 RU'BUS. 11—13. 92. Lat. *ruber*, red. Raspberry.
 1 *ide'us*, *w. M. h.* l q-pnt ter; l rh-o, ac, d be; pe fur: st pk, his, f sub-pn. Var. brh g: st pe t: l ter: pd sm pk. 4—6 f.
 2 *villosus*, *O. w. J. h.* pu, his pk: l in threes or fives; l o, ac, sr. 4—6 f.
 3 *frondosus*, *J. 2f.* stpk, e: l ter q, pu si: r l: pt or. 3—6 f.
 4 *strigosus*, *O. w. J. h.* unarm, his: l 3, pnt-q, ov, at base ot ac, white-d be, tm sub-cor. Fru red, sweet.
 5 *setosus*, *w. J. 2f.* st c, his: l ter or q, so green both sides.
 6 *cuneifolius*, *w. J. h.* brh, pe pd d, re pk: l dg, in threes or fives: l wd-ob, uneq to ab, d be: r tm, pn: pc 1-f.
 7 *canadensis*, *J. h.* g: l dg, in tens, fives & threes: l ln, na both sides.
 8 *occident'al'is*, *O. w. g. h.* brh pe gl pk: l ter, ov, ac, sub-lo 2-sr. 4-8 f.
 9 *hispidus*, *w. J. h.* prt: st, pe pd his, with brs: l ter, gh-sr, na.
 10 *trivial'is*, *O w J. h* sg prt: pe pd a-his, pk re: sti sb: l ter or q, ol-ov. a, uneq sr, sub-pu: pe sl, el. Var. or pt, sml so l.
 11 *inermis*, *h.* st, pe pd unarm: l ter, o, a, uneq sr, tom be; lt l sm gh.
 12 *spectab'ilis*, *h.* unarm, g. l ter, o, a, uneq 2-sr, pu be: pd tm, 1-f.
 13 *odora'tus*, *r. J. h.* unarm, e, his: l si, a 3 or 5-lo: cmb tm, spr. 3-6 f.
 14 *saxat'ilis*, *w. J. 2f.* her, pu: st crp: l ter, rh, a, gh-to, na; tm one pe: f sm in threes: pd el.

- 15 *obovalis*, M. 2f. st his, stiff h: 1 ter, rd-ob, sr, na: sti se. 2—4 f.
 16 *sempervirens*, w. J. 2f. st prt, pk: 1 ter, ob, sr, shining.
 17 *arcticus*, r. J. 2f. her, sml: st unarm, 1-f: 1 ter, g, ot sr: pt rd, em.
 18 *acaulis*, Ju. 2f. her, sml: st unarm, 1-f: 1 ter, sr: pt ol, en.
 19 *stellatus*, p. 2f. her, sml: st unarm, e, 1-f: 1 si, cor, 3-lo, rg-ve: pt ln.
 20 *pedatus*, w. 2f. her, sml, crp: 1 q, gh: pd fi, bt in middle: c g, rx.
 21 *chamæmorus*, w. J. 2f. her, sml: st unarm, 1-f, e: 1 si, sub-ren, rd-lo.
 22 *parviflorus*, w. 2f. unarm: 1 si, pal-lo: pd 2 or 3-f: f sml: seg c v, o, ac: pt ol-o.
 23 *deliciosus*, p. 2f. st fru, brh, unarm: brh pe pu: 1 si, rd-cor, sh 3-5-lo, v-pu, rg: bt ln, 1-to: f sub-cmb, tm: di c o-ol, ac, l at apex, sh pt.
 RUDBECK'IA. 17—3. 55. Rudbeck. Cone sunflower.
 1 *purpurea*, p. Ju. 2f. 1 br-o, ta to base, rt to: cau l ln-o, ac. 3—5 f.
 2 *discolor*, y. p. Au. 2f. brh cmb, 1-f: pd na, el: 1 ln, pilose: scales of c o, a: pt ln, en, two-cl, lg c. 2 f.
 3 *fulgida*, p. Au. 2f. st his: brh el, 1-f: 1 ln-ol, dte, his. 2—3 f.
 4 *hirta*, y. p. Ju. 2f. hir: st sub-ram, 1-f: pd na: 1 o-spt, 3-n, sr, h: scales of c in sh ray: ch ol, a. 2—3 f.
 5 *triloba*, y. p. Au. 2f. his: st pn: brh div, my-f, l: 1 ln, ac ends. 4—5 f.
 6 *laciniata*, O. y. Au, 2f. 1 pnt; 1 3-lo; up o: egret cre: st g. 5—10 f.
 7 *digitata*, y. Au. 2f. lower 1 pnt; up si pnt; top 3-cleft. 4—8 f.
 8 *pinnata*, y. p. Ju. 2f. 1 all pnt; 1 2-par, undi: egret en: st fur, his.
 9 *amplexifolia*, y. Au. 2f. g. 1 ln-ol, cor, cls; lower sr. dk cy. S.
 10 *laevigata*, y. 2f. g: 1 ln-o, ac each end, 3-n, to: scales c ln, lg ray.
 11 *spatulata*, Au. 2f. pu: st 1-f: 1 ob spt, en: c spr, im: ray f 3-to.
 12 *aristata*, y. st his: brh lg, cmb, 1-f: 1 ln-ol, sr, his: disk-hem.
 13 *radula*, 2f. st his, na gab: pd lg, 1-f: 1 o, his c im; scales o, ac cil.
 14 *subtomentosa*, Au. 2f. sh pu, sub-tom: brh e, my-f: 1 ln-ol, a, sub-sr; 3-lo: scales of c in, sh rays.
 15 *colamnaris*, r. Ju. 2f. 1 pnt; 1 ln, lr; rec el, cy. 1 f.
 16 *gracilis*, pu: st 1-3-f: pd el: 1 spt-o, rt dt: c spr: disk conic.
 17 *tomentosa*, y. Au. 2f. sh-pu, sub-tom: brh e, virgate: 1 ln, a, to en, sca; lower ter: scales of c ln-li, sh ray f. 3—4 f.
 18 *mollis*, p. S. 2f. st his, v, brh: 1 ss, ln-o, dt, soft-tom. 2—3 f.
 RUEL'IA. 13—2. 39. John Ruelle.
 1 *strepens*, w. p. Ju. 2f. e: 1 o, ln-o, wd, sh-pe, en re, sub-cil at base, so sub-pilose both sides: pd ax, sh, 3-f: di of c li, sh tube of co. 6—24 i.
 2 *ciliosa*, O. w. p. J. 2f. e, brh, hir: 1 pe, ov, ol ln-ol, a ot, sm cu pe, en or re, sub-cil: pd ax, sh w, 1-3-f: di of c half lg as tube co. 3—24 i. S.
 3 *tubiflora*, w. 2f. e, sm brh, so hir: 1 sub-ss, ol, re en: pd ax, sh, 1-f: di of c ln-li, third lg tube of co: co sub-eq, pu.
 4 *oblongifolia*, b. p. Ju. 2f. e, pu: 1 sub-en, ov ob, sub-ss, pd ax, sh.
 RU'MEX. 6—3. 28. Lat. *rumex*, sorrel or dock. Dock, sorrel 9, patience, or garden dock 12.
 1 *sanguineus*, J. 2f. va en, ol: 1 hr-ln, appendaged grain. 2—3 f.
 2 *crispus*, O. Ju. 2f. va of c o, en: 1 ln, undulated a. 3 f. 2—3 f.
 3 *verticillatus*, J. 2f. va en, sk l-less, f wr: 1 ln: she sti cy. 2 f.
 4 *britannicus*, J. 2f. va en, grained: sk pn l-less: she sti os, torn. 2—3 f.
 5 *pallidus*, J. 2f. va o, en, lr grain: 1 ln-li, a. sk slender.
 6 *obtusifolius*, O. J. 2f. va to l-grained: rad l hr-ol, ot: st sca. 2—4 f.
 7 *aquaticus*, Ju. 2f. va o, en os-grained: 1 hr-ln a. 3—4 f.
 8 *acutus*, 2f. va ol, sm to all-grained: 1 hr-ol, ac, wr l. 2—3 f.

- 9 *acetosellus*, O. g. p. M. 2f. va w grains: 1 ln-has: f die. 6—12 i.
 10 *alpi'nus*, va ve, en, na: 1 cor, ot, lr.
 11 *pulcher*, Ju. 2f. va to one-grained; rad l panduriform. E.
 12 *patientia*, 2f. va en, one grain-like appen: 1 ln-o.
 13 *acetosus*, 2f. st el: 1 ol, ar a, cls.
 14 *persicarioides*, J.  va to, all grained: 1 ln, en, pe. 6—12 i. S.
 15 *crispatus*, va ot cor, 3-to; 1 na; 2 uneq gr: sk l-less, lower l ov.
 16 *venosus*, Ap. 2f. va lr, hr-ren, en, net-ve: 1 sml, ln-ov. 12 f.
 17 *divaricatus*? Ju. 2f. va to, bearing grain: 1 cor-ol, ot, pu. 1—2 f.
 18 *hastatus*, Ap. 2f. va rd-cor, en gr: 1 pe, hast-ol, en ot. 1—3 f.
 RUP'PIA. 4—4. 7. Henry Bernard Ruppian.
 1 *maritima*, J. 2f. floating: 1 pectinate, ot: f sk.
 RU'TA. 10—1. 8l. Gr. *rud*, to preserve. Rue.
 1 *graccolens*, l dec; 1 ol, tm ob: pt en. E.
 SA'BAL. 6—3. 11. Origin unknown.
 1 *pumila*, Ju.  l fan-form: sep pn: f sub-ss, sml. 4—6 f. S.
 2 *minima*, ro crp: stipe sm pk: fr pal, sub-7-cleft? Fru brown hir. 8 i.
 SABBA'TIA. 5—1. 46. Liberatus Sabbati.
 1 *gra'cilis*, r. Ju. ♂. brh lax, el, 1-f: 1 ov-li: di of c li, eq co. 1 f.
 2 *stellaris*, r. Au. ♂. e: brh dic, el, 1-f: 1 ln, a: di of c sb, half lg co: di co ob: st t. 12—18 i.
 3 *angularis*, p. Au, ♂. e: 1 hr-o, cls: f lg pd, cmb: di c ln-li. 1—2 f.
 4 *calycosa*, r. Au. ♂. e, few-f: 1 ol, ot, ss: f sl, 7-par: c l: di ln. 1 f.
 5 *chloroides*, r. Au. ♂. 1ln, e: brh few, 1-f: f 7-13-par: di c li. 2—3 f.
 6 *corymbosa*, w. Au. 2f. l o, a, ss: st sm an: f cmb: di c sb, sh co. Var. 1 li, ln-li: c lg co. 1 f.
 7 *paniculata*, w. Au. 2f. brh: pn diffuse: 1 ln-li: st sub-t. 1—2 f.
 8 *brachiata*, r. Ju. l ln: pn lg: brh bt, 3-f: co twice lg c. S.
 9 *gentianoides*, r. Au. 1lg, li: f ax, ss: up crd: co 10-par.
 SAC'CHARUM. 3—2. 10. Lat. *saccharum*, Arabic *soukar*.
 1 *offinarum*, f pn, pa, ss ped: co 1-va, awnless. S. cane. E.
 SAG'NA. 4—4. 82. Lat, *sagino*, to fatten.
 1 *procumbens*, w. g. J. 2f. st prt, g: pt sh. Pearlwort. 3—4 i.
 2 *apctala*, J.  st e, pu: f apt.
 SAGITTA'RIA. 19—12. 13. Lat. *saggitta*, an arrow. Arrow-head.
 1 *sagittifolia*, O. w. Ju. 2f. l ln-a: lo ln, a, straight. 1—2 f.
 2 *hastata*, w. Ju. 2f. l ln-ol, a: lo spr, ln, lg-ac: sep si: bt c rd, ot. Var. 1 li, ot; lo spr, el, lj.
 3 *pubescens*, w. Au. 2f. pu: 1 ol-o, a; lo o, ac, straight: sep si: bt rd.
 4 *obtusa*, w. J. 2f. l br-o, rd-ot, m: sep si: bt o, a: die.
 5 *heterophylla*, O. w. Au. 2f. l si, li ln, a both ends, ov, a, at base ot: spr, li: sep si, few-f: p f sub-ss: bt br-o, ac. 8—12 i.
 6 *rigida*, w. Ju. 2f. l nr-ln, ke, a both ends: sep ram.
 7 *graminea*, w. Ju. 2f. l li, lg, 3-n: sep si, few-f: bt ol, ot.
 8 *simplex*, w. Ju. 2f. l ln-li, a, nr: sep si, my-f: bt c rd ot.
 9 *acutifolia*, w. Ju. 2f. l sb, she base: sep si, few-f: bt ac.
 10 *pusilla*, Au.  l li, ot, sh; top f: sep si, sh l: f few; p sl. 1—3 i.
 11 *natans*, w. Ju. 2f. l ln-ov, ot, 3-n, ta to base; sub-cor: sep si, few-f.
 12 *lancifolia*, w. J. 2f. l br-ln, a each end, g, cr: sep si: seed cp. 2—3 f.
 SALICOR'NIA. 1—1. 29. Lat. *sal* (*salis*) salt, *cornu*, a horn. Sam-phire.
 1 *herbacea*, Au.  her, spr: jt cp at apex, em-bifid. 12—18 i.
 2 *mucronata*, Au.  low, her: jt quadran bottom, cp tru at top.

- 3 *ambigua*, Ju. 24. $\frac{1}{2}$? prt: sml: sk al op: c tru.
 SA'LIX. 20—1. 99. Lat *salio*, spring up, and Celtic *sal*, near, and
lis, water. Willow. Weeping willow 24.
- 1 *viminalis*, y. Ap. $\frac{1}{2}$. l ln-li, lg ac, en, sub-undulate, d be: gld sc
 mr: sti sml: scales am rd, h: gm ss, o: style fi: stg a, undi.
- 2 *can'dida*, Ap. $\frac{1}{2}$. l ln-li, lg, os dt at apex, pu ab, d be. 3—4 f.
- 3 *mu'hlenbergia'na*, Ap. $\frac{1}{2}$. l ln, a, sub-en, h, rg-ve be. 3—5 f.
- 4 *tristis*, Ap. $\frac{1}{2}$. l ln-li, a both ends, en; mr rx so ab, rg-ve d be. 3—4 f.
- 5 *recurvata*, Ap. $\frac{1}{2}$. l ln-ob, a, en; mr gld, g, gl be, sti none: re: scales
 black at apex; h lg of gm: gm o, sh pe. 2—3 f.
- 6 *repens*, J $\frac{1}{2}$. crp: l ln-ov, en, a, g, sm silky be: am o, scales ob, ot, h,
 gm o-ol, pe, pu: style sh: stg 2-lo: cps g. White Hills. Small.
- 7 *reticulata*, J. $\frac{1}{2}$. crp: l rd-ov, ot, en, g, net-ve, gl be: pd, dian.
- 8 *vestita*, J. $\frac{1}{2}$. crp: l rd, en, g ab, net-ve, be lg, ap, silky h: sti none.
- 9 *uva-ursi*, $\frac{1}{2}$. l spt-ob, ot, en; mr gld, g ab: sti none: aments f after l,
 lax: scales ol, cil: gm o, pe, g: style 2-par: stg 2-lo.
- 10 *cordifolia*, $\frac{1}{2}$. dp: l ov, sub-a, cor at base, en, net-ve, g ab, pale be.
- 11 *obovata*, $\frac{1}{2}$. diffuse: l ob, ot, en, g ab, v be: sti none: aments fl-
 time, ss, ol, dian: scales ob.
- 12 *planifolia*, $\frac{1}{2}$. e, div: brh so: l ln-ol, a each end, sr in middle, g, spr,
 flat, discl: sti none.
- 13 *prostrata*, $\frac{1}{2}$ l w sti, ot dt, ov-a, gl-silky be: st prt.
- 14 *pedicellaris*, Ap. $\frac{1}{2}$. brh so: l ln-ob, a, en, both sides g, cl: sti none:
 aments f at l, pd, g: scales ol, half lg pe: gm o-ol, g, lg pe: stg ss.
- 15 *lambertiana*, Ap. $\frac{1}{2}$. l op, ln-ob, a, g, sub-sr at apex, discl: sti none:
 aments before l: sca rd: fi l: gm ss, ov-o, silky: style sh: stg o. em.
- 16 *rosmarinifolia*, Ap. $\frac{1}{2}$. l straight, ln-li, a both ends, en, sub-gld at
 mr, puab, silky be: sti nr-ln, e: aments l, o, re: scales ol ot, cil.
- 17 *fusca*, Ap. $\frac{1}{2}$. l ln-ob, a, g, sub-sr, gl be, pu young: sti nr.
- 18 *conifera*, Ap. $\frac{1}{2}$. l ln-ol, rt sr, a, g ab, flat, d be, first year g: sti sub-
 dt: aments precede l: scales ln, ot, v: gm pd, ln, silky. 4 to 8 f.
- 19 *myricoides*, Ap. $\frac{1}{2}$. l ln-ol, a, 2 glands at base, g, gl be: sti o, a, gld-
 sr: aments f at l time, v, l at base: scales ln, ot, v, dark-cl.
- 20 *prinoides*, Ap. $\frac{1}{2}$. l ov-ol, r, rt sr, g, gl be: sti half-cor, gh-to. a-
 ments precede l, v, gm pd, o, ac: style lg: stg 2-cleft. 6—8 f.
- 21 *discolor*, Ap. $\frac{1}{2}$. l ol, ot, g, rt sr, en at apex, gl be: sti caducous, ln,
 sr: aments f near l time, ol, d: scales ol, a, h: stg 2-parted.
- 22 *angustata*, Ap. $\frac{1}{2}$. l ln, a, lg, ta to base, sr, g, both sides cl: sti cor:
 aments precede l, e, so: gm pd, o, g: style 2-cleft: stg 2-lo.
- 23 *longifolia*, $\frac{1}{2}$. l li, ac both ends, el, rt dt, g, both sides cl alike: sti
 nr-ln, dt: aments f after l, pd, d: scales flat, re: fi b at base. 2 f.
- 24 *babylonia*, $\frac{1}{2}$. pnd: l ln, ac, sr, g, sides of different cl: sti rd.
- 25 *falcata*, $\frac{1}{2}$. l lg, ln-li, ta ab, a at base, close-sr, g sides sti rx.
- 26 *nigra*, $\frac{1}{2}$. l ln, a both ends, sr, same cl: pe d ab: sti to. 20 f.
- 27 *lucida*, $\frac{1}{2}$. l o-ol, ac, rd base, sr, gld, g: sti ol, gld-sr, gm sb.
- 28 *rigida*, Ap. $\frac{1}{2}$. l ln-ol, ac, sub-cor at base, g, sr; sr el: pe v.
- 29 *cordata*, $\frac{1}{2}$. l ln-ol, ac, cor at base, sr, g, paler be: sti br, rd-o.
- 30 *grisea*, Ap. $\frac{1}{2}$. l ln, ac, sr, g ab, d midrib, na be: sti li. 8 f.
- 31 *alba*, $\frac{1}{2}$. l ln, ac, sr, silky both sides, lower sr gld: sti os.
- 32 *vitellina*, $\frac{1}{2}$. l ln, ac, sr, g ab, white be: aments f in l time.
- 33 *ambigua*, Ap. $\frac{1}{2}$. l ln, ac, g, sides same cl, gld-sr: aments fl time.
- 34 *decipiens*, Ap. $\frac{1}{2}$. l ln, ac, sr each end, g, both sides cl slike.

- 35 *petiolaris*, Ap. $\frac{1}{2}$. l ln, sr, so, gl be, uneq at base: sti to, sml.
 36 *russcliana*, $\frac{1}{2}$. l ln, ac, sr, g: aments fin l time: f 3 s: gm pd, sb.
 37 *myrsinites*, $\frac{1}{2}$. l ov-o, sr, g cl alike: sti ln, sr: brh rough. 1 f.
 38 *herbacea*, Au. $\frac{1}{2}$ l rd, sub-rt, sr, g both sides: sti none: aments fl.
 39 *eriocephala*, Ap. $\frac{1}{2}$. l ol-ov, sm re at base, sr. twigs d: aments ov, v.
 40 *houstouiana*, $\frac{1}{2}$. l ln-li, a, sr, g, one-cl: sti: am s fl time, cy, v.
 SALSO'LA. 5—2. 29. Lat. *salsus*, salt. Salt-wort.
 1 *kali*, Ju. \odot . dc: l spi: c mr, ax: V. l dilated, sh, t, n-less, spi.
 2 *tragus*, Ju. \odot . her, spr, so: l sb, m-sp: f sub-sl: c sub-o, mr flat.
 3 *soda*, \odot . her, so: hrh as: l t, a: fru-bearing c ko in middle mem.
 SAL'VIA. 2—1. 42. Lat. *salvo*, to save. Sage.
 1 *urticifolia*, b. J. $\frac{1}{2}$. v: l o-ol, to, de along pe: c 3-to; up seg 3-to.
 2 *lyrata*, b. M. $\frac{1}{2}$. rad l ly, to: up lip of co sh: st l-less. 1—3 f.
 3 *claytoni*, b-p. J. $\frac{1}{2}$. l hr-o, sin, to, rg: teeth of up lip c cv. 1 f.
 4 *officinalis*, b. J. $\frac{1}{2}$. or $\frac{1}{2}$. l ln-o, cre: wr few-f: c m. E.
 5 *sclara*, $\frac{1}{2}$. l rg, cor, ol, v, sr: f bt lg c, ac. Clarry.
 6 *azurca*, b. w. Au. $\frac{1}{2}$. l ln-li; lower sr: st and l so: c pu, sh. 4—6 f. S.
 7 *coccinea*, r. Ju. $\frac{1}{2}$. l cor, a, tom, sr: co 2-lg as c, nr. 1—2 f.
 8 *trichostemoides*, b. \odot . l ln, sr: r tm: f op: co eq to 3-cleft c, st brh.
 9 *obovata*, Ju. l lr, ob, to, pu: wr 6-f. 18 i.
 SALVI'NIA. 21—1. 5. Salvini of Florence.
 1 *natans*, \odot . l ov, ot, fas brs ab: pe pil o, se: fru sub-ss.
 SAMBU'CUS. 5—3. 58. Gr. *sambuke*, Heb. *sabucca*, elder.
 1 *canadensis*, O. w. J. $\frac{1}{2}$. brh and pe g: l 4 pa, ol-ov, g, ac cym. 8—15 f.
 5 *pubescens*, w. M. $\frac{1}{2}$. bark warty: l in 2 pa, ln-ov, pu be: fr. 6—12 f.
 SAMO'LUS. *Samos*. Brook-weed.
 1 *valcran'di*, w. Ju. $\frac{1}{2}$. l ob: r el: pd bt near middle. 8—12 f.
 2 *erectatus*, w. $\frac{1}{2}$. st sh, so, di at base: l ob, ot, sm fleshy: r el. S.
 SANGUINA'RIA. 12—1. 62. Lat. *sanguis-iuis*, blood. Blood-root.
 1 *canadensis*, O. w. Ap. $\frac{1}{2}$. l sub-ren, sin-lo: scp 1-f. 6—10 i.
 SANGUISOR'BA. 4—1. 92. Lat. *sanguis*, blood, and *sorbco*, to absorb.
 Burnet saxifrage.
 1 *canadensis*, w. Ju. $\frac{1}{2}$. f in lg cy sk: s lg co. 3—5 f.
 2 *media*, r-w. $\frac{1}{2}$. sk cy: s lg co: sk sh, tinged red.
 SANIC'ULA. 5—2. 60. Lat. *sano*, to heal. Sanicle.
 1 *marylandica*, O. w. J. $\frac{1}{2}$. l digitate; l ol, gh: part f fer, ss. 2—3 f:
 SANTOLI'NA. 17—1. 55. Lat. *santo*, a holy little herb. Lavender cotton.
 1 *suaveolens*, y. J. \odot . g: st cmb-brh: l sub-bipnt; di a, li: pd tm. S.
 SAPIN'DUS. 8—2. 65. Lat. *sapo indus*, Indian soap
 1 *saponaria*, w. $\frac{1}{2}$. l g, pnt; l ln-ov, 3--4-pe: rachis br wi. 20—30 f. S.
 2 *marginatus*, $\frac{1}{2}$. unarm: rachis nr; mr ab: l ln, 6-pa: fru sub-conical.
 SAPONA'RIA. 10—2. 82. Lat. *sapo*, soap. Soap-wort, bouncing bet.
 1 *officinalis*, w. J. $\frac{1}{2}$. c cy: l ln-o, op, sub-conate, en. 10—18 i.
 2 *vaccaria*, r. Au. \odot . c 5-cornered, cone-o: l o, ac, ss. 6—18 i.
 SARO'THRA. 5—3. 68. Gr. *sarothron*, a broom. Nit-weed, pine-weed.
 1 *gentianoides*, p. y. J. \odot . sml, e, se-ram: l c-p: f on brh al, sl. 4—8 f.
 SARRA'CENIA. 12—1. 62. Dr. Sarrazin. Side-saddle.
 1 *purpurea*, O. p. J. $\frac{1}{2}$. l rad, sh, gibbose-inflated, cup-form. 1—2 f.
 2 *heterophylla*, y. J. $\frac{1}{2}$. l rad; outer lg-fun, nr lt wi: contracted twice
 lg as inflated part: inner l sh, wi: style lg fi. 12—30 i
 3 *rubra*, r-p. J. $\frac{1}{2}$. l; lt wi li; o. e, ot, m contracted at base. 6—10 i.
 4 *flava*, y. J. $\frac{1}{2}$. l lr, fun; ex; lt wi w: appendage e, cp base. 18—24. i.

- 5 *catesbaei*, 2f. 1 e; tube fun; lt wi li: appendage e, sub-ren ve. 12-18 i.
 6 *variolaris*, y. J. 2f. 1, tube near summit spotted on back. 12-18 i.
 SATURE'JA. 13-1. 42. Arabic, *ss'atur*, aromatic. Savory.
 1 *hortensis*, b-w. Ju. ☼. pd ax, sm in cyme: 1 ln. en: st brh. E.
 2 *montana*, h. pd sm 1-sided: seg of c ac, m: 1 m.
 SAURU'RUS. 7-4. 98. Gr. *saura*, lizard, and *oura*, tail. Lizard tail.
 1 *cernuus*, Au. 2f. st an: 1 al, hir-ol, ac. 1-2 f.
 SAX'IFRA'GA. 10-2. 84. Lat. *saxum*, rock, and *frango*, to break.
 Saxifrage. Beef-steak 22.
 1 *aizo'on*, 2f. 1 spt, a, g, teeth: st si, 1, pilose: c g. 3 i.
 2 *stellaris*, w. Ju. 2f. 1 wd, sr, pilose at mr: st si, na: pt a- cps sup.
 3 *serpyllifolia*, 2f- e: 1 sml, ov, g: st 1-f, few-l: pt ob.
 4 *androsa'cea*, w. 2f. pu: 1 pe, li-spt: st 1, 1-2-f.
 5 *brouchialis*, 2f. 1 lin, sb, flat. m, spi, cil: st na, pn. Sg.
 6 *nivalis*, w. J. 2f. 1 rd-wd, cre, de into pe: st na, si: r crd. 2 i.
 7 *virginiensis*, O. w. M. 2f. pu: 1 ov, ot, cre, de into pe. 1-15 f.
 8 *geum*, 2f. 1 ren, to, ve-less, pilose: st na, pn.
 9 *penusylvanica*, O. g-w. J. 2f. pu: 1 ln-ol, a, ta to base, os dt: 1-4 f.
 10 *laurentiana*, 2f. rad 1 lg pe, 5-7-lo-cre, g: st and pd h: f few hd.
 11 *oppositifolia*, p. M. 2f. ces: 1 cau, op, im, o, ot; up cil: f tm, sl, ss..
 12 *aizoides*, y. 2f. dc, ces: 1 cau, li, al. to-cil: pn few-f: pt lg as c.
 13 *setig'era*, w. 2f. pu: 1 rad, spt, a, spi-cil: st 1, 2-f: c his: se ax 1.
 14 *hirculus*, 1 cau, al ln, na, unarm; st e.
 15 *rivularis*, w. J. 2f. e: 1 pe, pal, up spt: st few-f: ro fi: gm half in.
 16 *sibirica*, w. 2f. as: 1 ren, pal, pilose; cau ss: pe hir; pd lg, fi 2-fid.
 17 *pectinata*, 2f. ces: st nm, 1: 1 3-lo; lo 3-cleft, li, a, g: midrib fur.
 18 *caespitosa*, y. J. 2f. 1 rad, crd, li, ot, en or 3-cleft, n be: st e na.
 19 *tricuspidata*, w. J. 2f. 1 rad, crd, wd-form, cil, a 3-to: st as, r.
 20 *cernua*, 1 cau, pal, pe: st si, 1-f, bu.
 21 *mixta*, 1 dg, 3-fid, n, sub-hir: anth ar, stg rx: st sub-v, 2-3-f.
 22 *sarmentosa*, w. An. 2f. 1 rd, to, h: 2 pt in each fel. E.
 23 *leucan'theni'folia*, w. r. y. Ju. 2f. hir: st sm na: 1 el-spt. 18-24 i. S.
 24 *erosa*, y-g. Ju. 2f. g: st na: 1 ln-ol, a, erose-dt: pn ol; brh div.
 25 *juncus'ii*, p. 1 ren, cre-to, pnt both sides, g: st sh, few-f. 1-2 f.
 SCABIO'SA. 4-1. 56. Lat. *scabies*, itch. Scabious.
 1 *stellata*, y-w. ☼. co 5-cleft, ra: 1 cut: crown of seeds mem or. E.
 2 *atropurpurea*, r. 2f. co 5-cleft: 1 pnt and cut: rec cy, crown sh, cre.
 SCREUCHZE'RIA. 6-3. 7. Scheuchzer. Flowering rush.
 1 *palustris*, g-y. M. 2f. st g: 1 semi-cy, she at base; lt pore at tip.
 SCHIZAN'DRA. 19-5. 77. Gr. *schizō*, to split, and *anēr*, stamen.
 1 *coccinea*, r. y. M. h. g: 1 al, ln, sub-dt, pe, sm cor cli. 10 15 f. S.
 SCHI'ZÆA. 21-1. 5. Gr. *schizo*, to cleave. One-sided fern.
 1 *pusilla*, Ju. 2f. fr si, li-cp: sk conglm. 3-6 i.
 SCHOE'NUS. 3-1. 9. Gr. *schoinos*, Bog rush.
 1 *mariscoides*, Ju. 2f. culm t, l: 1 ½t: utm; fas sk 3 on each pd. 2 f.
 2 *hispid'ulus*, pd ax and tm, 3-sk: sk glo, pe: 1 fi, his. S.
 3 *effusus*, Au. culm 1, ot 3-an: 1 pk: pn tm, lg, diffuse. 6-10 f.
 SCHOL'LEA. 3-1. 17. Frederic Adam Scholler. Water grass.
 1 *graminifolia*, O. y. Ju. 2f. 1 all li. st floating. 6-18 i.
 SCHRANK'IA. 15-10. 93. Francis Schrank. Sensitive plant.
 1 *sensiti'va*, pk: 1 pnt; 1 in pa, inmost minute. E.
 2 *uncinata*, p. Ju. 2f. st prt an, pk: 1 al, bipnt: 1 sml. 2-3 f. S.

SCHWAL'BEA. 13—2. 40. Christian Schwalbe. Chaff-seed.

1 *americana*, p-y. J. 2f. si, pu: l ln: r tm: f al. 2 f.

SCIL'LA. 6—1. 16. Gr. *skullō*, to injure. Squill.

1 *maritima*, w. sep lg, na, my-f, bt rx: ro bu. E.

SCIR'PUS. 3—1. 9. Lat. *seirpus*, a rush. Club-rush.

(Style articulated to the seed, persistent. ELEOCHARIS.)

1 *tenuis*, O. Ju. 2f. culm quadran: sk ov, a end, style 3. 8—12 i.

2 *glauca*, Ju. 2f. culm my-an, gl: sk o, a: glu o, ot or em: style 2. 1 f.

3 *palustris*, J. 2f. culm rd, inf: sk ln-ol: glu sm ot: seed rd, pte, rg-

4 *capitatus*, Ju. 2f. culm t, cp: sk o, ot: seed ov, cp, so.

5 *aeicularis*, Ju. culm sc, quadran: sk o, a, 3—6-f: glu sm ot. 3—6 i.

6 *pusillus*, Au. culm cp and sub-an: sk o, cp: seed ob: s 2---3. 1 i.

7 *intermedius*, culms ces, quadran: sk o, ol, glu a: s 3. 3—4 i.

8 *planifolius*, culm trian: rad l li, flat, eq culm: sk tm, ol, cp. 8 i.

9 *subterminalis*, Au. culm inf, l: sk sl, sm tm, ln: style 2-cleft. 3 f.

10 *caespitosus*, Ju. culms ces, t: sk o, few-f: glu bt lg as sk. 8 i.

(Style filiform, not bearded, caducous. SCIRPUS.)

11 *americanus*, Au. culm na, 3-an: sk lt, 1—5, o, crd glu m ss. 3—5 f.

12 *debilis*, Au. culm ces, fur: sk 3, lt, o, ss: glu o, ot, m. 8—12 i.

13 *laeustris*, culm t ab, na: pn sub-tm: sk pd, o. 4—8 f.

14 *acutus*, Ju. culm t. spot: pd nm, sub-lt: sk ol: glu pu, m. 4 f.

15 *atrovireus*, Ju. culm trian, l: cyme tm, com: inv 3-l: sk crd, o a. 2 f.

16 *brunneus*, Au. culm l, ot trian: cyme decom: inv 3—4-l, sk rd. 2-3 f.

17 *macrostachyus*, Au. culm trian. l: cmb r: inv 3-l, lg: sk ol. 3—4 f.

18 *pendulus*, culm trian, l: l striate, mr sca: sk ol-cy, sl: glu 1-va. 3 f.


(Style filiform, caducous, bristled. TRICHOPOPHORUM.)

19 *criophorum*, O. Au. 2f. culm ot trian, l: pn dec, no: sk pd. 4—5 f.

20 *lineatus*, Au. culm 3-an, l: pn tm, dec, no: inv 1—2-l. 2—3 f.

(Style simple at base, not articulated to the seed. ISOLEPSIS.)

21 *subsquarrosus*, Au. 2f? culm trian, na: sk 3, tm, o: glu squar at top.

22 *capillaris*, Au.  culm na, 3 an, cap: sk o, 2—3 pd, int ss one. 8 i.

23 *autumnalis*, Au. 2f. culm cp: u com: inv 2-l: sk ln, a, 4-sid. 8--12 i.

24 *simplex*, J. 2f. culm t: sk sm o: glu ot: seed ob, 3-an. 8—13 i. S.

25 *filiformis*, Au. sk cy, ol, ot: scales rd: seeds na at summit: culm fi.


26 *gcniculatis*, Ju. sk o-ol: scales rd-o: culm t, r separate.

27 *tuberculatus*, Au. culm t, striate: glu ot, ap: seed sm 3-an. 12 i.

28 *quadrangulatus*, 2f. culm 4-an; 3 sides concave: sk cy. 1—2 f.

29 *equiscoides*, J. sk cy, tm; scales ot, culm t, 2-jt. 18—24 i.

30 *mueronatus*, Au. l-less: sk ol: scales en, ac, culm 3-an.

31 *stenophyllus*, Au.  culm fi, ot 3-an: l se: inv 4-l, lg. 3—4 i.

32 *coarctatus*, Oct. u com, crd: sk sml, ln-li: inv se, l lg u: l fi. 1 f.

33 *castoncus*, Ju. sk o-l, ot: inv 2-l, lg com u.

34 *sulcatus*, Au. sk ln-o, sm ac: u com, lg as inv: seed fur. 1 f.

35 *nitens*, Ju. sk o, pd: cmb com, ax aud tm: culm t.

36 *divaricatus* culm ot 3-an: u dec, div: sk ov, pnd. 3—4 f.


37 *schoenoides*, culm 3-an: pn dec, ax and tm, pnd: sk clus. 2—3 f.

38 *sylvaticus*, 2f. sk ol, crd: cmb l, dec: scales ol, ot, green: culm l.

39 *oratus*, Ju. 2f. sk o: scales ol: f sm dian: culm sub-cp, she w pk.

SCLERANTHUS. 10—2. 30. Gr. *sklēros*, hard and *anthos*, flower.—

Gravel chickweed.

1 *annuus*, O. w-g. J.  c of fru spr, a: st spr, sub-prt.

SCLE'RIA. 19—3. 9. Gr. *skiēros*, hard. Whip grass.

1 *triglomerata*, J. h. culm a trian, sca: 1 ln-li, sca, pilose. sk fas. 2 f.

2 *pauciflora*, Au. 2f. culm 3-an, g: 1 li, g: sk lt and tm. 12—18 i.

3 *verticillata*, Au. 2f. culm si, 3-sided: culm and l g: sk na, 1 f.

4 *reticulata*, Ju. culm and l g: she wi: sk sc, ax and tm. 1—2 f.

5 *oligantha*, culm 3-an, g: 1 nr, n, sca: sk 2—3, sub-tm, ss. 12-18 i. S.

6 *gracilis*, culm fi, 3-an: culm and l g: sk few-f, fas sub-tm: glu g. 1 f.

7 *ciliata*, culm e, g, na: 1 li, pu ab: sk tm, clustered bt glu cil. 1—2 f.

8 *hirtella*, culm e: culm, l and bt hir: sk tm and ax: glu pu: nut rg.

9 *interrupta*, culm si, 3-an: culm and l pu: sk glm, na; al r, glu brs.

SCOLOPEN'DRIUM. 21—1. 5. Gr. *skolopendra*, the centipede. Caterpillar fern.

1 *officinatum*, Ju. 2f. fr br-ln, cor at base: stipe chaffy. 8—10 i.

SCROPHUL'BRIA. 13—2. 37. Lat. *schrophula*, king's evil. Fig-wort.

1 *marylandica*, O. g-p. Ju. 2f. 1 cor, sr, a, rd at base; pe cil be. 3—7 f.

2 *lanceolata*, g-y. Au. 2f. 1 ln, uneq sr, ac, a at base: pe na. 3—5 f.

SCUTELLA'RIA. 13—1. 42. Lat. *scutellum*, little shield. Scull cap.

1 *lateriflora*, O. b. Ju. 2f. brh, g: 1 lg-pe, o, to; cau sub-cor. 1—2 f.

2 *galericulata*, O. b. J. 2f. brh: 1 sub ss, ln-o, sub-cor at base, cre.

3 *gracilis*, b. J. 2f. si: 1 rt, br-o, to, so, ss, sca on mr- 12—18 i.

4 *parvula*, b. J. 2f. pu, si, brh from base 1 en, ot, ss, rev mr ro jt. 3—6 i.

7 *laxigata*, b. M. 2f. si, so: 1 op, pe, o sr, en at base apex, a, sub-ac, cil,

ta base, ve, g, be: r si, tm, f op, bt, pu, e; up bt sml en: flr. 12—18 i.

8 *integrifolia*, b. Ju. 2f. sm si, pu: lower l o, cre, ta to base; up ln-li,

ot, en, ss: r lax-f, l. Var. 1 all li. 1—2 f.

9 *pilosa*, b. J. 2f. si, pu: 1 rt, rh-o, ot, rd-cre, rg, pe: lower cor. 18—24 i.

10 *canescens*, b. 2f. brh: 1 o, a, a to, pe, h-v be; lower sub-cor: r ax tm,

pe, sub-pn: bt ln-o, lg c: bt f v. 2—3 f.

11 *ovalifolia*, b. J. 2f. 1 ss, o. sub-ov, sr; up ln, sub-en.

12 *cordifolia*, b. w. Au. 2f. 1 br-cor, a, ot to; pe lg: r op tm. 2—3 f.

13 *ambigua*, w-b. 2f. low, sub-dc, div, brh: 1 ss, o, rt sr h above. 4—6 i.

14 *resinosa*, b. gld-pu, brh: 1 o, ot, nr at base, en: f ax v.

15 *nervosa*, b. Au. 2f. si, g: 1 ss, o, to, n: r tm, lax, l. S.

16 *angustifolia*, J. 2f. si, pu: 1 li: f ax op: s ex.

17 *caroliniana*, 2f. brh, g: 1 pe, ln-li, a, en; r lax, l: c ot.

18 *scrrata*, b. Ju. 2f. brh, pu: 1 o, ac, sr, sh-pe: r tm, lax, pn: bt ln, sh.

19 *villosa*, J. st e, brh, v: 1 lr. ln, a at each end, to, v be, his ab. 2—3 f.

SECA'LE. 3—2. 10. Lat. *secale*, rye. Rye.

1 *cercle*, J. ♂. glu brs sca-cil: co so. E.

SE'DUM. 10—5. 86. Lat. *sedo*, to sit. Live-forever 5. False ice p.

1 *ternatum*, w. J. 2f. sml, crp: 1 flat, rd-spt, ter: f sm 3-sk.

2 *telephioides*, p. Ju. 1 br-ln, a, dt: cmb my-f. 1 f.

3 *nuttallii*, 1 rd, flat, en, sc: cymes tm, trich.

4 *lanceolatum*, w? 1 flat, sub-al; crd, ln-ol, a, g, mr gld-sr: st brk, as-surg: f cyme-cmb: pt ln, spr.

5 *telephium*, r. w. Ju. 2f. 1 flat, to-sr, sc: cmb l: st e. E. Orpine.

6 *anacampscros*, 2f. 1 wd, en, sub.ss: st dc: f cmb. Stone crop.

7 *pulchellum*, p. g: st assurg: 1 sc, li, ot: cyme my-sk: f ss, octan. S.

8 *pusillum*, w. Ju. 2f. e, g: 1 el, t, ol: f sub-tm, few, al, sub.pe. 2—4 i.

9 *stenoptalum*, y. Ju. 2f. g, st as: 1 sc crd, ss, cp-sb, a: cyme tm, thrice dic: sk rc: f ss: pt li, lg c.

10 *rhodiola*, g. y. 2f. e, si: 1 im, ss, ob, a, gl, to ab: cymes tm. 8 i.

SELE'NIA. 14—1. 63. Gr. *selene*, the moon.

1 *aurea*, y. ☼. st g, sub-di at base, a-trian: l so, sm suc; rad sub-bipin, ss: pd ax an. 4—6 i. S.

SEMPERVI'VUM. 12—13. 83. Lat. *semper*, always, and *virens*, living. Houseleek. Tree houseleek.

1 *tectorum*, Au. 2f. l cil: bul spr: nec wd, cre. E.

2 *arborescens*, st woody, so, brh: l wd, g, soft spr h.

SENE'CIO. 17—2. 55. Lat. *senex*, an old man. Fire weed 2. Ragwort 9. Groundsell 1.

1 *vulgaris*, y. J. 2f. l cls, sin-pnt, to: f pn: st e, brh. 12—20 i.

2 *hieracifolius*, O. w. J. ☼. st pn: l cls, ol, a; a, uneq to. 4—8 f.

3 *elongatus*, Ju. 2f. g: rad l spt, sr, ta into pe; cau l pnt, to, rt: u.

4 *pauciflorus*, 2f. g: rad l lg-pe, rd-o, sub-cor, to; cau ones 2, rt, pnt, pd sh, sm in 3's, u. 8 i.

5 *pauperculus*, 2f. st si, e, na: l ln; rad sub-en gh-to: cmb few-f: c so.

6 *gracilis*, 2f rad l lg-pe, or, sub-cor, cre; cau few, rt, li-ol, inf base, gh-to: pe sh, hir, u: c so: rays few, sh. 1 f.

7 *obovatus*, y. M. 2f. rad lob, cre-sr, pe; cau pnt, to: fu, lg-pd, bt.

8 *balsamita*, y. J. 2f. rad l ol, sr, pe; cau ly pnt: f sub-u. 1—2. f.

9 *aureus*, y. J. 2f. rad l o, cor, sr, pe; cau pnt, to, tm di ln. 18—24 i.

10 *cymbalaria*, rad l rd, pe, tru at base, to: pe ly; cau ss, li gh-to: st l-f.

11 *canadensis*, l pnt. li, g; up si pnt: f in com, fs cmb.

12 *ciliatus*, w. st pilose: l ln li, cil. S.

13 *tomentosus*, 2f. h woolly: st si: l pe, ln-ov, sr: cmb sub-u. 2 f.

14 *fastigiatus*, y. rad l ol, hr-o, cre-to, g; cau pnt, di gh-to. 2—3 f.

15 *lobatus*, y. ☼. g: l ly-pnt; lo rd, sub-re: cmb-com. 1—3 f.

16 *integerrimus*, y. J. so: st si: l en; rad lg-pe, ln, a; cau ss, ac; cmb si: pd l-f: rays sh hem, c. 12—18 i.

SERPIC'ULA. 20—9. 22. Lat. *serpo*, to creep. Ditch moss.

1 *canadensis*, O. w. Ju. 2f. per f trian: stg rx, 2-cleft: l li, a, sm wr.

SES'AMUM. 13—2. 40. Gr. *sesumon*, ancient name.

1 *indicum*, r-w. Au. ☼. l ln-o: lower 3-lo; up undi, s.. 2—4 f. E.

SESBA'NIA. 16—10. 93. Arabic *Sesban*.

1 *vesicaria*, y. Au. l eq pnt; l (10—20 pa,) ol, ot, g: r few-f, sh l: loment ln, lg sti, 2-seeded. 5—7 f. S.

2 *macrocarpa*, O. y. p. S. ☼. l eq pnt; l (10—25 pa,) ov, g, sub-gl be: r ax, few-f: le el, t. 4—12 f.

SES'ELI. 5—2. 60. Lat. *sesclis*, Gr. *seselis*.

1 *triternatum*, y. 2f. l triter; l lg-li: u hem; inv my-l, li l lg of u.

2 *divaricatum*, y. M. 2f. st brh, div: l bipnt, gh di: inv none. 4—6 i. S.

SESLE'RIA. 3—2. 10. Leonard Sesler. Moorgrass.

1 *daetyloides*, g' culm se, l: l sh, flat, sb, sub-pilose: sti b: sk 2-3, few-f: co 2-fc ac, en. 4—5 i. S.

SESU'VIUM. 11—5. 87. Gr. *sekos*, bird's nest.

1 *sessile*, r. Ju. f ss: l li-ol, flat.

2 *pentandrum*, Au. l ln-li, ot, suc: f sl, ss, pentan. S.

3 *pedunculatum*, w. Au. l ln-li, ot: f sl, ax, pd, polyan.

SEYME'RIA. 13—2. 37. Seymer.

1 *tenuifolia*, y. p. Au. ☼? g, brh: l com-pnt: seg fi, op al: co sub-rotate: cps g. 3—4 f. S.

2 *pectinata*, y. S. ☼? viscid-pu, brh: l pnt: di undi, a, li. 2—4 f.

3 *macrophylla*, y. Ju. brh: 1 so; lower pnt to; up ln, en: tube co lanu-
ginous: s ex. 4—5 f.

SIBBAL'DIA. 5—5. 92. Sir Robert Sibbald.

1 *procumbens*, y. Ap. 2f. l ter: 1 wd, 3-to, so ab, h be.

2 *erecta*, r-w. Ju. ♂. e, brh: rad l twice 3-cleft: seg sub-di. 4—6 i. S.
SI'CYOS. 19—15. 97. Gr. *sikuos*, cucumber. Single-seed cucumber.

1 *angulata*, O. w. Ju. ☼. 1 cor, ot hind lo, sca, dt: fru capitate, his.

SI'DA. 15—12. 74. Gr. *sidē*, a name given by Theophrastus. In-
dian mallows.

1 *spinosa*, y. Ju. ☼. st spr: ax sub-sp: 1 lg pe, ln-o, os cor, to. 1—2 f.

2 *abutilon*, y. Ju. ☼. 1 rd-cor, ac, to, tom: pd sl, sh pe: cps 2. awn. 4-6 f.

3 *napaea*, w. Ju. 2f. 1 hr-5-lo, g: lo ol, ac, to: pd my-f cps w awn. 2-4 f.

4 *dioica*, w. Oc. 2f. 17-lo-pal, sca: lo ln, gh-to: cmb bt: f die.

5 *crispa*, w. Au. ☼. 1 ol-cor, ac, cre; up ss: pd sl, lg pe, fru inf.

6 *stellata*, r. pu: 1 ln, a, erose-sr, rg: pe ax, sh pe, 3-5-f: f capitate glm:
cps (12-14,) m, 1-2-seeded, br at base.

7 *hispida*, y. Au. 2f. his-pilose: 1 ln, sr: pd sl, ax, as lg pe. 1—2 f. S.

8 *rhombifolia*, y. Au. 2f. 1 ln-ol, to, wd en at base: pd lg pe. 1—2 f.

9 *alcaeoides*, Ju. 2f. lower l 3-an-cor, gh; up pal-my-cleft: cmb tm c h.

10 *gracilis*, y. Au. 2f. st g: 1 li sr: pd sl, ax, lg pe: cps 10. 2—3 f.

SIEGESBECKIA. 17—2. 55. Dr. J. G. Siegesbeck.

1 *flosculosa*, y. Au. ☼. 1 ss, o, to: f of disk 3-to, trian.

2 *laciniata*, 1 gh-pnt; up ln, en, tuberculate: c sh: f of ray lr. S.

SILE'NE. 10—3. 82. Gr. *sialon*, saliva. Catch-fly.

1 *pennsylvanica*, r. J. 2f. pu: 1 wd; up l ln: st few-f at summit. 6—10 i.

2 *virginica*, r. J. 2f. dc, viscid-pu: 1 ol, rough mr: pn dic: pt 2-cleft: s
ex. Var. f sub-fas. 12—18 i.

3 *antirrhina*, O. w-p. J. ☼. 1 ln, sub-cil: pd 3-par: pt em: c o. 1—3 f.

4 *nocturna*, w. J. ☼. f al ss, on one-sided sk: pt 2-cleft.

5 *acaulis*, r. Ju. 2f. st-less: 1 li, ke: pd tm, sl, e, 1-f: pt em.

6 *armeria*, w. r. Au. ☼. f fas, fs: up l cor, g: pten. E.

7 *conica*, r. ☼. c of fru conic, striate: 30 striae 1 soft, ln: pt bifid.

8 *dichotoma*, w. Au. ♂. c o, viscid-h, e: pt 2-cleft: r pa, tm, one-sided:
f int, pd: 1 pe, ln-o, cil at base.

9 *noctiflora*, w-r. Ju. ☼. c 10-an, ve: teeth of tube eq: st dic: pt bifid.

10 *quinquevulnera*, r. Ju. ☼. hir: 1 wd-ol; up li: pt rd, en. 8—12 i. S.

11 *ovata*, r-w. J. 2f. 1 ln-o: ac, so: r tm, com: c o: s ex: st si.

12 *fimbriata*, w. M. st pu: 1 ob cil: pt lr, fiubriate. 6—8 i.

13 *regia*, r. J. 2f. pu: 1 br-o, op, sm sca: c lg-cy: pt obl. 2—3 f.

14 *rotundifolia*, r. Ju. dc: st c mr of l pilose: 1 br-ov, ac each end.

15 *baldicini*, r. f lr, trich: pt div-gh: st c sub-ln l pilose.

16 *axillaris*, p. Au. viscid-pu: st brh: 1 o ov, pe, sub-dn: f ss, ax sl. 8 i.

SIL'PHIUM. 17—4. 55. Gr. *silphion*, the name of a plant. Ragged cup.

1 *perfoliatum*, y. Au. 2f. st 4-sided, so: 1 op, connate, o, sr. 4—6 f.

2 *integrifolium*, y. Au. 2f. st 4-sided, rough: 1 op, ss ol, en, sca. 4 f.

3 *trifoliatum*, y. S. 2f. st 6-an, so: 1 wr, in threes, ln o, uneq to-sr, sca
ab; up ss: pn trich. 4—6 f.

4 *ternatum*, y. Ju. 2f. st t, so: 1 wr in 3s, pe, ln, sub-dnt, sca. 4—6 f.

5 *gumniferum*, y. Ju. 2f? st e, his: 1 sin-pnt, sub-his be: f lr, ax, sub-
ss: scales of c o, ac, his on mr. 2—3 f. S.

6 *laciniatum*, O. y. Au. 2f. st his ab; rad cau l pnt: di to-sin: pn. 8—12 f.

7 *pinnatifidum*, y. Au. st g: 1 sin-pnt, sub-sca, h be: scales c ov. 4—6 f.













- 8 *compositum*, y. Ju. 2f. st so: cau l pnt-sin: rad ter, sin-my-cleft: f sml, pn. 2—4 f.
- 9 *terebinthinaceum*, O. y. Ju. 2f. st so: rad ren-cor, lo to: cau l al, o, sr, sca: pn com, my-f. 4—5 f.
- 10 *connatum*, y. Au. 2f. st t, his: l op, connate, rt sr, sca. 6 f.
- 11 *lacrigratum*, y. Au. 2f. st si, 4-an, fur, g: l op, ss, o, ac, sr g. 2 f.
- 12 *scaberrimum*, y. Au. st sub-an; an rg ab: l o, sub-ac, sr, sca both sides, sh pe: f cmb: scales of c o, cil. 3—4 f.
- 13 *atropurpureum*, y. Au. 2f. st t, so: l wr in 4s, ln, sca, sub en. 4 f.
- 14 *dentatum*, y. Au. st e, sm g: lower l op; up al; ln, sin to. 2—3 f.
- 15 *asteriscum*, y. Ju. 2f. st si, t, his: l op al, ol, a, sr, sca: f few, sl. V. l ln ol, cre, ss, sca: c sub-cil. 2—3 f.
- 16 *pumilum*, y. Au. 2f. st pe tom: brh l-f: l al, hr-o, sr, pe. 2—3 f.
- 17 *clatum*, y. 2f. l al, pe, cor, sin: scales of c ot.
- 18 *reticulatum*, y. 2f. l al, ln o, cor, sr, ot, v.
- 19 *subacaule*, y. sm sca: st sh: pd lg: l ol, sub-sin-pnt, to: di of c rh. SINA'PIS. 14—2. 63. Lat. *sinapis*, radish. Mustard.
- 1 *nigra*, y. J. ☼. silique gh, 4-an, cp to st: l at top ln-li, en so. E.
- 2 *alba*, y. ☼. silique brs, sh 2-edged beak: l pnt; up sub-ly, all to. SI'SON. 5—2. 60. Gr. *sison*, running stream.
- 1 *trifolius*, l ter; l to; ov, 2-3-lo; up ln-ov: u tm, sl, pd: seed rd. S.
- 2 *pusillus*, Ap. ☼. l triter, my-par: u few-f: f-6, seed m. 1—2 f.
- 3 *costatus*, Oc. ☼? lr: st si be: l cap-my-par; seg sub-v rib-seed 4—5 f. SISYM'BRIUM. 14—2. 63. Gr. *sisumbrion*, water rocket.
- 1 *officinale* O. y. J. ☼. siliques cp to rachis of sk l run. 1—3 f.
- 2 *canescens*, y. Ap. ☼. l bipnt; di to, ot, sm ob: pt lg c: siliques an, as, sh pd. 1—2 f.
- 3 *cherianthoides*, O. y. J. ☼. siliques e: fru-bearing pe spr: l ln, sub-en. SISYRIN'CHIUM. 15—3. 18. Gr. *sus*, a hog, and *rughos*, snout. Blue-eyed grass.
- 1 *anceps*, O. b. J. 2f. scp si, 2-edged or 2-wi: glu spa 2 uneq. 6—12 i.
- 2 *micronatum*, b. J. 2f. l scp si, sub-se: spa cl, va termina. 9—12 i.
- 3 *bermudianum*, b. J. 2f. st cp, brh, l: spa unawn, sh f: pt m. 8—18 i.
- 4 *brachycarpum*, sub-g: l bi-pnt; lo ln, ot, en, par to: pt lr c, silique li.
- 5 *humile*, 2f. white h: st diffuse: l en pn-to; rad spt; cau ln, ta at base: silique pod li, 5 lg pe, t, pu. SI'UM. 5—2. 60. Gr. *sion*, Celt. *sio*, water. Water parsnip.
- 1 *latifolium*, w. Ju. 2f. l pnt; l ol-ln, a sr: st e, an, so. 1—3 f.
- 2 *lineare*, w. Ju. 2f. l pn; l li, sub-ln, a sr: inv my-l, li: u tm.
- 3 *tricuspidatum*, O. Ju. l pnt; lower l ln; up ob, 3-to. 2—3 f. S.
- 4 *nodiflorum*, w. J. ☼. st prt: l pnt; l o: u ax, ss. 2 f. SM'LAX. 20—6. 12. Gr. *smilax*, of *smile*, a scraper. Green briar 3, bohea tea 9, Jacob's ladder.
- 1 *buadrangularis*, Ju. h. st pk, 4-an: l unarm, o, a, sub-cor, 5-n.
- 2 *sarsaparilla*, J. h. pk: l unarm, ln-o, sub-5-n, gl be, pd lg pe.
- 3 *rotundifolia*, O. w-g. J. h. pk sc: l rd-o, ac, cor, 5-n: ber sph.
- 4 *caduca*, J. h. pk: l o, m, 5-n, mem: pd lg pe.
- 5 *pseudo-china*, h. unarm: cau l cor; ram ol-o, 5-n: pd lg.
- 6 *laurifolia*, Ju. h. pk: brh unarm: l ov ln-ov, re-pk, 3-n: u sh-pd.
- 7 *tamnoi'des*, Ju. h. st pk, t: l o-ol, os cor, 5-n; pd lg pe.
- 8 *peduncularis*, w-g. M. 2f. st t, cli or arching over: l rd-o, cor, ac, 9-n: (sm 7) u lg-pd. 2—3 f.

- 9 *herbacea*, g. J. 2f. st an, e, si: 1 lg-pe, ov, 7 n: u lg cp pd. 2—3 f.
 10 *hastata*, Ju. h. st an, pk: brh unarm: 1 ln, ac, au at base, 3-n, pk-cil on mr. Var. 1 lg, nr, ln. S.
 11 *bona-nox*, Ju. h. st unarm, an: 1 hr-o, a, 7-n, pk-cil.
 12 *walteri*, Ju. h. pk: 1 hr-o, so, 3-n: ber ac.
 13 *ovata*, Ju. h. unarm: 1 unarm, o, a, 3-n, cl alike: pd sh pe.
 14 *lanceolata*, J. h. unarm: 1 ln o, a ac, 3-5-n, g: u my-f: pd sh.
 15 *alba*, J. h. unarm: st os an: 1 ln-el, cr, g, en, 3-n: u few-f, sh-pd.
 16 *pumila*, h. unarm: 1 hr-o, en, sm 5-n, soft-pu be: u sh-pd: pe sh: ber ol, a: st prt.
 17 *cincidifolia*, h. pk: 1 unarm, rd-cor, ac, 5-n, g both sides, net ve.
 SOLA'NUM. 5—1. 38. Lat. *sot*, sun, and Greek *aneu*, without. Potato 5, bitter-sweet 1, tomatoes 6, Jerusalem cherry 8, love apple 6.
 1 *dulcam'ra*, p-b. Ju. h. st unarm, cli; 1 cor g; np few-f; cmb op l.
 2 *nigram*, O. w. p. b. J. ☼. st unarm, e; brh an, dt: 1 o, re, g. 1—2 f.
 3 *carolinense*, b. J. ☼. st pk: 1 ol, tom, sin-an, sub-hastate. 1—2 f.
 4 *flavidum*, tom; brh c pk: 1 sl, ol, ot; lower re-sin; up os sin.
 5 *tuberosum*, b. w. Ju. h. st wi-an, unarm: 1 int pnt; 1 en: f cmb. E.
 6 *locoper'sicum*, y. ☼. st unarm: 1 pnt, gh: r 2-par, l-less: fru g.
 7 *inclonge'na*, J. ☼. st unarm: 1 o, tom: pd pnd: c unarm.
 8 *pseudo-capsicum*, h. st woody: 1 ln, re: u ss.
 9 *mammosum*, y. Ju. ☼. st pk, her: 1 cor, lo-an, v both sides, pk. S.
 10 *virginianum*, b. Ju. ☼. st e, pk: 1 pnt, pk both sides: di sin, ot.
 11 *triflorum*, w. Ju. st unarm, her, prt: 1 to-pnt, so: di a, sub-undulate: mr sub-rev: pd op l, 2-3-f. 1 f.
 12 *jamess'ii*, w? ☼. her, sm pilose: st unarm, e: 1 uneq pnt; 1 lu-o, nr at base, os sin: r few-f, out of ax.
 13 *verbascifolium*, h. st unarm, fru: 1 o, tom, en: cmb 2-cleft, tm.
 SOLIDA'GO. 17—2. 55. Lat. *solido*, to make firm. Golden rod.
 1 *canadensis*, O. y. Ju. 2f. st d: 1 ln, sr, rough; r pn, re: rays lg disk: st an: 1 ss, three i lg, sm en. 2—5 f.
 2 *pro'ccra*, O. y. Ju. 2f. st v, e: 1 ln, sr, v be: r sk, e, rays sh. 4—7 f.
 3 *scroti'na*, O. y. S. 2f. st e, t, so: 1 ln-li, g, sr: r pn: pd d, l cil young.
 4 *gigantea*, O. y. Au. 2f. st e, g: 1 ln, so, sr, 3-n: r pn: pd h. 4—7 f.
 5 *ciliaris*, O. y. 2f. st e, g: 1 ln, sm 3-n, g: bt cil: rays sh: st an: rad l pe, ov, ve, sr: brh of pn spr-bt.
 6 *reflexa*, y. Au. 2f. st e, v: 1 ln, sub sr, sca, rx: r pn 1-sided, rx.
 7 *lateriflora*, y. Au. 2f. st e, h: 1 ln, 3-n, g; lower sub-sr: r pn, re: f lr, rays lg c: st striate, pnt, nm lt f brh. 2—3 f.
 8 *as'pera*, y. Au. 2f. st e, t, h: 1 o, sm ov, rg, sr: r pn: 1 1-2 i lg. 3-4 f.
 9 *altissima*, O. y. Au. 2f. st e, h: 1 ln; lower sr, sca, rg: pn r nm spr every way: rays lg again as c: sr l eq & uneq: h v. 3—6 f.
 10 *rugosa*, O. y. Au. 2f. st e, h: 1 ln, sca, rg; cp sr: r pn, spr. 3—6 f.
 11 *scabra*, O. y. Au. 2f. st e, h, fur: 1 ol ta both ends, ac, g ab. 2—5 f.
 12 *nemoralis*, y. Au. 2f. st e, d: cau l ln, his, en; rad sm wd, sr. 1-3 f.
 13 *pat'ula*, O. y. S. 2f. st e, g: 1 ov, sr, g; rad ol-spt: r pn, spr: pd pu: st wand-like, an striate; st-l ss, inch lg; 2 f.
 14 *ulmifolia*, O. y. Au. 2f. st e, g, striatæ: 1 ov, sr, ac, v be: rad ob: r pn: pd v: rays sh: rad l h both sides, rest ol-o v ve be. 3—4 f.
 15 *argu'ta*, O. y. S. 2f. st e, g: 1 g, uneq sr; cau ov, rad l g. 2—3 f.
 16 *junceae*, y. Au. 2f. st e, g: 1 ln, g; lower sr: r pn: st sm an striate, l; r dense, rc-spr: com pe rough, bt: ray twice lg c. 2—3 f.

- 17 *elliptica*, y. Au. 2f. st e, g: l ov, so, sr: r pn: rays middling lg. 2-4 f.
- 18 *asperata*, 2f. st cmb-pn: r e: fas: l ln, sr, sca.
- 19 *recurva'ta*, y. S. 2f. st e, pu: l ln, sr: r el, re pn.
- 20 *sempervirens*, y. S. 2f. st e, g: l ln, sm so, en: r pn: pd h: st tall, gl: l my, nr, lg: ray flg, nr, nm. 3-5 f.
- 21 *odora*, O. y. Au. 2f. ste, pu: l ln-li, en, g: r pn: up part of st fur. 3 f.
- 22 *villosa*, y. 2f. st e, v: l ln, soft, sr, n-less: r pn, one-sided. 2-3 f.
- 23 *specio'sa*, y. 2f. st tall, so; brh virgate: l ln, sub-cr, sca on mr; lower sr: r e, com: pd pu: f of ray five, lg: seed g. 3-6 f.
- 24 *virgata*, y. Au. 2f. st si, so: l ln, sm wd, oten, g, cp: up sml. 2 f.
- 35 *bi'color*, O. w. Au. 2f. st h: l ov, h; lower sr; on f brh en. 2-4 f.
- 26 *petiolaris*, y. Oc. 2f. st e, v: l ov, pe: rays twice lg as c: st brh, t: l hoary ribs, an inch lg, cover f-brh en: r nm, sh, few lf f. 2-3 f.
- 27 *sirieta*, y. Au. 2f. st e, g: cau l ln, en, g; rad l sr: r pn, e. 2 f.
- 28 *squarrosa*, y. 2f. st e, brh, pu: l so; lower br. spt-ov, sr, a, mr sca; np ss, ln-ov, en: r com, e: c squarrose, my-f: ray flg. 2-5 f.
- 29 *graminifolia*, O. y. S. 2f. st h, fur, so: l li, en, e, 3-5-n: cmb tm; level-top: f in hd: rays not lg disk. St l: l ss, 2 ilg: f sml. 4-5 f.
- 30 *tenuifolia*, y. S. 2f. st an, brh, cmb: l spr, li, nr, 3-n, sca. 1-2 f.
- 31 *eae'sia*, O. y. Au. 2f. st e, so even: l ln, g, ac, mr n rough: rays lg disk: st sm zigzag, brh, l: l 2 ilg, sub-en, sub-gl, be: r nm, sh. 2-3 f.
- 32 *livida*, y. S. 2f. st g, pn: l sr, g: brh r at extremity: rays el.
- 33 *hispida*, O. y. Oc. 2f. st e, his, sca: l ln, en; rad sr.
- 24 *lithospermifolia*, y. S. 2f. st brh, pu: l ln, sca both sides, ta, 3-n.
- 35 *puberula*, y. 2f. st si, t, pu: l ln, en, pu both sides, ta both ends; rad sub-sr: r sk, ax, e: pd pu: scales of c ln-li, a. 1-2 f.
- 36 *laevigata*, y. S. 2f. st e, so: l ln, fleshy, en, so in every part: r pn: pd v: rays twice lg as c. 4-6 f.
- 37 *limonifolia*, y. S. 2f. st g: l ln, sm en, so both sides: r pn, e. 3-5 f.
- 38 *vimin'ea*, y. Au. 2f. st e, sub-pu: l ln-li, mem, ta to base, g; lower sr: rays el: pd brh an: bt ln, so: f nm.
- 39 *macrophylla*, y. Au. 2f. lower l o, ac, ta, uneq sr, g: cau l ta both ends, ln, sub-ss, sr: r ax, pd, l, lg l: c ol, my-f: rays sm el. 2-3 f.
- 40 *flexicaulis*, O. y. Au. 2f. st zigzag, g, an: l ln-ac, sr, g: r ax: rays half lg again c: st purple, t an: l nm, sh br pe, 2 ilg. 2-3 f.
- 41 *latifolia*, y. Au. 2f. st sin zigzag, an, so: l o-ac, sr, so wi pe.
- 42 *axilaris*, O. Au. 2f. st g, t: l ln, sr, g: r ax, sub-glo, e: fel.
- 43 *virgau'rea*, y. 2f. st fl, an, pu: l sr at base: r pn, close: rays el: f lr: rays 5-10; up len, 1-3 f. V. f few. 3-6 i.
- 44 *multiradiata*, y. S. 2f. st sm v: l ss, ln, g. cil; sr at apex: r tm, e.
- 45 *rigida*, Au. 2f. st cmb, h, sca: l o-ol, minute rigid h; lower sr, up en: r compact: rays twice lg ot c. St t, striate, l. l hoary.
- 46 *noveboracensis*, y. Oc. 2f. rad l ov-ol, lg-pe: st l-less, brh fur, level-top cmb: rays twice lg as ta c: st fur, l at origin of fbrh. 2-3 f.
- 47 *cineras'eens*, y. S. 2f. st e, pu: l el, ln-li, at base, sr, sub-sca.
- 48 *retrorsa*, y. 2f. st e, t, g, l ss, li, ta ab, g, rx, mr: brh of pn re: st pu ab: l sm cls, m. 3-4 f.
- 49 *tortifolia*, y. 2f. st e, pu: l ln-li, sub-sr, spr, twisted; midrib up sca, g be: pn py: r re. St puab: l sm pu be, 3-n: pn com. 3 f.
- 50 *pyramidata*, y. S. 2f. st e, t, his: l ol, a, sm cls, ss, g. 4-6 f.
- 51 *corymbosa*, y. S. 2f. st e, g: brh his: lower l ln-ol; up o; all fleshy, g, rigid, sca cil on mr: r cmb; re: ray fel. 4-6 f.





- 52 *pubescens*, y. Oc. 2f. st e, brh, pu: l lg, ln, ta un base, pu; sr. 3-4 f.
- 53 *pauciflosculosa*, y. S. 2f. g: lot, n-less: pn com, my-f; fas e: c 5-f ol.
- 54 *pulverulen'ta*, y. 2f. st si: st l pu; l ss; lower ov, sr; r e, sk: ray f (10,) el: lower l sm: up lob, en, m'r sca. 3-4 f.
- 55 *crecta*, y. 2f. st si: st pd pu: l ln, a each end, g, ve, sca on mr. 2 f.
- 56 *hirta*, y. 2f. st pn: l ln, sca both sides; cau sr; brh en: r e: rays el.
- 57 *glomerata*, y. 2f. st si: l g, ln-ol, sr: r si, com of ax glm; up clustered: c turgid, iny-f: lower l br-ov, ac, sr.
- 58 *h'milis*, y. 2f. st si, e, g: l ln, sr, g, ta at base, el: r e.
- 59 *clata*, y. S. 2f. st t, pilose, tom ab: l ln-ov, a, sub-en, ve, tom be: r e, pn: rays el: l ss, sml ve elevated. 2-3 f.
- 60 *salicina*, y. 2f. st tall, pu ab, sca: brh virgate, el, e: l ln, sca ab, g be: lower sr: r secund: brh sh, sm rc: st g, cl: l ss. 4-5 f.
- 61 *angustifolia*, y. S. 2f. st e, g: l sb-li, en, g: r e, pn: ray f middle size: st slender: brh nm: l ss, sm ln-li, sca on mr. 2-3 f.
- SON'CHUS. 17-1. 53. Gr. *sogchos*, the ancient name. Sow-thistle 2.
- 1 *arvensis*, y. Au. 2f. c pd his, u: l run, dt, cor at base: ro crp.
- 2 *oleraceus*, O. y. Ju. ☼. pd sub-tom, u: c g: l ln-ol, cls, dt, sin. 2-5 f.
- 3 *macrophyllus*, b. Au. 2f. pd hir, na: f pn: l lr, ly, cor at base. 4-7 f.
- 4 *spinulosus*, y. Au. ☼. pd so, sm u: l cor at base, ol, cls, sp. 2 f.
- 5 *alpinus*, b-w. Au. 2f. pd hir, na: f r, bt: l run, sagittate base, g be.
- 6 *leucophæ'us*, b-w. Ju. ♂ pd scaly: f r: l run, ac: st wand-pn. 3-5 f.
- 7 *floridanus*, b. Ju. ♂. pd sm scaly. f pn: l run-ly, pe dt. 3-6 f.
- 8 *acuminatus*, b. Au. ♂. pd sm scaly: f pn: rad l sub-run; cau o, ac, pe, dt in middle. 3-4 f.
- 9 *pallidus*, y. Ju. 2f. f com tm r or pn: l ln sab, cls, to.
- 10 *ludoricianus*, y. J. l run, to: pd c na: pn div. 3-5 f. S.
- 11 *carolinianus*, y. Au. ☼. st e, g: l ln, a, sub-sp-to, au at base, half-cls: f sm u. 1-3 f.
- SOPHO'RA. 10-1. 93. Arabic *sophera*, tree.
- 1 *scricea*, w. 2f. l pnt; l wd-ov, so ab, v be: sk my-f, ss. 1 f. S.
- SOR'BUS. 11-5. 92. Lat. *sorbeo*, to suck. Mountain ash.
- 1 *americana*, w. M. ♀. l pnt: l a, sm eq sr, g; pe g, ber red. 10-20 f.
- 2 *microcarpa*, J. ♀. l pnt; l ac, uneq gh-sr, g; sr se-m: pe g: ber red.
- SORGH'UM. 3-2. 10. Sorghi, the Indian name. Broom corn.
- 1 *saccharatum*, y-g. Au. ☼. pn sm, wr, spr: seeds ov: glu h. 6-8 f. E.
- 2 *vulgare*, 2f. pn com, ov, no: seed na, sub-cp. Coffee corn. 5-7 f.
- SPARGA'NIUM. 19-3. 8. Gr. *sparganon*, fillet. Burr-red.
- 1 *ramosum*, O. w. Ju. ☼. 3-sided bases l concave outside: fru-st brh: stg. Fl in rd hd; s hd ab p, sml. 1-2 f.
- 2 *americanum*, w. lower l eq lg of st; fl concave at base, e: stgsi, o-ol, half lg as style, ends float. Near Troy. 1 f.
- 3 *angustifolium*, w. Au. 2f. l flat, lg-li, nr, lg st, weak: ends floating.
- SPARGANOPH'OROUS. 17-1. 55. Gr. *sparganon*, a fillet, and *pherō*, to bear. Crown-cup.
- 1 *verticillatus*, p. Au. 2f. l li, wr: hd few, tm: egret cm, 5-to, flo. 1 f.
- SPAR'TIUM. 16-10. 93. Gr. *spartion*, a rope. Broom.
- 1 *juncum*, J. ♀. brh op, wand-like f at end: l ln, g. E.
- 2 *scoparium*, J. ♀. l ter and sl, ol: f ax: le pilose at mr: brh an..
- SPER'GULA. 10-5. 82. Lat. *spergo*, to scatter. Spurry.
- 1 *arvensis*, w. J. 2f. l fi, wr: pn dic: pd rx: seed ren. 8-12 i.
- 2 *saginoides*, w. J. 2f. or ☼. g: l op, sb, na: pd sl, lg. 2-3 i.

- 3 *nodosa*, l sb, op, g, con: lower she, up proliferous ax: pt twice lg c.
 4 *subulata*, g, sub-pu: l nr li-su, m: pd lg, sl: pt eq c and cap
 SPERMACO'CE. 4—1. 57. Gr. *sperma*, *akōke*, sharp point. Button weed.
 1 *diodina*, w. Ju. ☼. st diffused, t, hir: l ln-li: sti lg, my brs. 4—12 i.
 2 *tenuior*, w. Ju. ☼. st e, g: l ln, sca ab, g be: f wr, fsl. S.
 3 *glabra*, w. J. ☼. st pc, g: l ln-o, g both sides: f wr: seeds g.
 4 *involuta*, w. st his: brh al: l ln-o, ac, hir both sides: sti my-brs. 1 f.
 SPHAE'RIA. 21—6. 1. Gr. *sphaira*, globe.
 1 *polymorpha*, forms various, clubs ventricose, surrounded spherules.
 SPHAG'NUM. 21—2. 4. Plinny's name for moss.
 1 *latifolium*, O. l o, sub-ot, concave, im: converging at apex, cap sph.
 SPIGE'LIA. 5—1. 46. Adam Spigelius. Pink-root.
 1 *marylandica*, p. J. 2f. st 4-sided: l op, ss, ln-o, en. 9—18 i.
 SPINA'CIA. 20—5. 29. Lat. *spina*, a thorn. Spinach.
 1 *olera'cca*, J. ☼. fru ss, pk, or unarmed: st brh. 1—2 f. E.
 SPIRÆ'A. 11—5. 92. Gr. *spiraon*, spiral coil. Meadow-sweet 1.—
 Steeple bush 2. Hard-back 3.
 1 *salicifolia*, O. r. w. J. ½. l ln-o, ob, sr, g: f pn, r spr. 2—4 f.
 2 *tomantosa*, O. r. Ju. ½. l ln, uneq sr, d be: r crd, sub-pn, sk. 2—3 f.
 3 *hypericifolia*, w. M. ½. l ob, en, to at apex: u ss. 3 f.
 4 *corymbosa*, r-w. ½. l ol-ob, gh-to, pu be: cmb tm, pd, com, fs, sm l.
 5 *crenata*, ½. l ob, a, to-cre at apex: cmb pd, crd.
 6 *opulifolia*, w. J. ½. l sub-o, lo, 2-to or cre, g: cmb tm, crd. 3—5 i.
 7 *capitata*, J. ½. l o, sm lo, to be, tom: cmb tm, crd, sub-cap, lg-pd.
 8 *sorbifolia*, w. Au. ½. l pnt; l sr: f pn.
 9 *mo'nogy'na*, ½. l br-o, sub-3-lo, gh-sr, g: cmb u: style one: pe g.
 10 *aruncus*, w. J. 2f. l 2—3-pnt: f pn sk: styles 3 to 5. 4—6 f.
 11 *lobata*, r. Ju. 2f. l pnt. g: l lr, 7-lo: lt 3-lo, cmb prolif.
 12 *ulmaria*, w. r. Au. 2f. l pnt, d be: tm l lr, 3-lo; lt undi: f cmb. E.
 13 *dis'color*, Ju. ½. l o, sub-lo, to, ot, tom be, so ab, sh pe: pn tm. S.
 14 *betulifolia*, r. J. ½. l br-o, gh-to, g: cmb tm, com, fs, l. 1 f.
 STA'CHYS. 13—1. 42. Gr. *stachys*, spike. Hedge nettle.
 1 *hyssopifolia*, Ju. e, sm g: l ss, l, ln-li, to: wr 4-f. 12--15 i.
 2 *as'pera*, O. w-p. Ju. 2f. st e, brh op, his: l sub-pe, ln-o. 1---2 f.
 3 *sylvatica*, p. Au. 2f. l o, sub-cor, ac: wr 6-f: st pk. 1---2 f.
 4 *volutina*, b. st si, 4-an, v, sub-his: l ln-o, cre-sr, ss, cls, op. 1 f.
 5 *hispida*, y-p. Ju. 2f. st and l his: l pe, o-ol, a, ot sr: wr 4-f, c g. S.
 6 *tenuifolia*, st e, an, so: l pe, ln-ov, sr, ac: wr 6-f: c pu.
 7 *intermedia*, 2f. wr my-f: c sub-pungent: l ol, sub-cor, cre: st woolly.
 STAN'LEYA. 13—2. 63. Lord Stanley.
 1 *pinnatifida*, y. 2f. gl, so: l sm int pnt: di sub-ln, rt to: r tm. 3 f. S.
 2 *integrifolia*, y. st si, an: l en, o, ol, ta both ends: r tm: silique lg pe.
 STAPHYLE'A. 5—3. 95. Gr. *staphula*, a bunch. Bladderwort.
 1 *trifolia*, y-w. M. ½. l in threes: r pnd: pt cil below. 6—12 f.
 STARK'E'A. 17—2. 55. Rev. Mr. Starke.
 1 *spinulosus*, y. Au. 2f. l bi-pnt, gh-to: di li, m: flt and tm. 1—2 f. S.
 STAT'ICE. 5—5. 33. Gr. *statidō*, to arrest. Marsh rosemary.
 1 *limo'nium*, b. Au. 2f. sep t: pn brh: l ln-ob, ot, m, g. 12—18 i.
 2 *armeria*, r. 2f. sep si, t: l li, flat. 1 f.
 STELLA'RIA. 10—3. 82. Lat. *ste'la*, star. Chick weed, star-wort.
 1 *media*. O. w. M. 2f. l o, hr-o. g: st pc, al lines of h op sides. 9—15 i.
 2 *pu'bera*, w. M. 2f. pu: l ss, o, cil: pd e, pt lg c. 6—10 i.

- 3 *borealis*, w. Ju. 1 ln-ov: pd ax, el, 1-f: pt and c eq.
 4 *biflora*, w. J. 2f. ces: 1 sb, crd: brh 2-par: pt em: c striate.
 5 *palustris*, w. J. 1 la-li, en, gl: f pn: pt 2-par, lg c.
 6 *uliginosa*, w. J. st diffuse, pc, brh: 1 ln, cil, nr at base: pd sm in pa.
 7 *humifusa*,  1 o, sub-secund, ss: st pc, 4-cornered: pd sl, sh.
 8 *longipes*, g, gl: 1 li-sb, spr: pd tm, brh: bt mem; pd el: pt br lg c.
 9 *lacta*, e, gl: 1 e, ln, br at base, a, cre, so: pd sm in pa, 1-f, sm few-f.
 10 *prostrata*, Ap.  1 o, a, so: pe lg: st prt, t, dic, sub-pu. 1-4 f. S.
 11 *james'iana*, pu: 1 ln, sub-fal, ss, a: st sm brh: pn lax, div, pt lo.
 STE'VIA. 17-1. 55. James Steve.
 1 *callosa*, r.  1 li, crd, sm succulent cr at apex; up al: f div. S.
 STIC'TA. 21-5. 2. Gr. *sticktos*, dotted.
 1 *crocata*, thallus dark, gl, brown, pitted, br, rd, spr en lo: lemon cl spots on mr, and on pits d tawny.
 2 *pulmonacea*, thallus pitted, d be, so: seg sin-lo, tru: rec mr, mr rg.
 STILLIN'GIA. 19-15. 96. Mr. Benjamin Stillingfleet.
 1 *sylatica*, y. J. 2f. her: 1 ss, ln-ol, ta at base, sr. 2-3 f. S.
 2 *sebifera*, Ju.  1 pe, rh, ac, en, gld base pe; s f pe. 20-40 f.
 3 *ligustrina*, J. fru: 1 ln, ta to each end, en, pe: s fsh-pe. 6-12 f.
 STI'PA. 3-2. 10. Gr. *stupē*, feathery substance. Feather grass.
 1 *avenacea*, J. 2f. 1 striate, g: pn spr, sub-unilt: brh wr with brh.
 2 *juncea*, Au. 2f. 1 fi: pn lax: c sm awned, lg seed: awn lg, pu.
 3 *canadensis*, 1 se: pn sml: c g, ot-o, eq pu seed: awn sh.
 4 *expansa*, 1 fur, g, sm g: sk al, pn, spr: fss, rt: clg co: awn sh, na. S
 5 *stricta*, pn lg, nr: pd jt: awns na, sm fl.
 6 *parviflora*, 2f. 1 rad, sub-rigid, fi: pn ap and diffuse, my-f. 1-2 f.
 STI'PULICI'DA. 3-1. 30. Lat. *stipula*, the stipule, and *caedo*, to cut.
 1 *setacea*, w. M.  ? ste, so: 1 sml, op, spt: brh-l none. 6-10 i. S.
 STOKE'SIA. 17-1. 55. John Stokes.
 1 *syanea*, b. 2f. st l: 1 ln: pd ax, 1-f. S.
 STREPTAN'THUS. 14-2. 63. Gr. *streptos*, twisted, and *anthos*, flower.
 1 *maculatus*, p. M.  gl: st e, t: 1 cls, hr-o, a, en: r tm. 1-2 f. S.
 STREPTO'PUS. 6-1. 12. Gr. *streptos*, twisted, and *pous*, foot. Rose bell-wort.
 1 *roseus*, r-w. M. 2f. g, shining: 1 cls, sr-cil: anthers sh, 2-horned.
 2 *distortus*, y. M. 2f. g: 1 cls: pe sl, twisted knee in middle. 2 f.
 3 *lanuginosus*, g-y. J. 2f. woolly: 1 ss, cor at base, ac: pe in pa.
 STRUTHIOP'TERIS. 21-1. 5. Gr. *strouthos*, an ostrich, and *pterus*, a feather. Ostrich fern.
 1 *pennsylvanica*, 2f. bar fr bipnt: di en, ot; lower el, a.
 STUART'IA. 15-12. 70. John Stuart.
 1 *virginica*, w. M.  1 o, ac: fax, in pa: c o, ot. pt en. 6-12 f. S.
 STYLOSAN'THES. 16-10. 93. Gr. *stulos*, a column, and *anthos*, flower. Pencil flower.
 1 *clatior*, y. Au. 2f. st pu on one side: 1 ln, g: bt ln, cil. 9-15 i.
 STY'RAX. 15-12. 71. Gr. *sturax*, benzoin.
 1 *grandifolium*, w. Ap.  1 br-ob, ac, tom be: r si, ax, l base. 4-12 i. S.
 2 *pulverulentum*, w. Ap.  1 ov, a, tom be: r lt, few-f, l. 18 i.
 3 *lac've*, w. Ap.  1 ln, ac each end, sr g: co tom: r lt, l. 4-6 f.
 4 *glabrum*, w. Ap.  1 ln ov, a each end, sr, mem, g: r lt l. 6-8 f.
 SUBULA'RIA. 14-1. 63. Lat. *subula*, an awl. Awl-wort.
 1 *aquatica*, w. Ju.  st-less: 1 sb. 1-2 i.

- 2 *alpi'na*, A. 2f. st brh: lob. S.
 SWER'TIA. 4—1. 46. Emanuel Swert.
 1 *deflexa*, g-y. Ju. ♂. co bl, with rx horn l o: brh sh. 18—24 i.
 2 *pusilla*, b. J. ☼. co wh, twice lg as c: st si, l-f: l ol. 1 i.
 3 *fastigiata*, b. Ju. 2f. co bl, lg as c: f fs, ax tm: pe pa. S.
 SWIETENIA. 10—1. 71. Van Swieten. Mahogany.
 1 *mahagonii*, h. l sm 4-pa; l ln-o, uneq at base, ac: r ax, pn. S.
 SYE'NA. 3—1. 17. Arnold Syen.
 1 *fluvialis*, J. 2f? l crd, sb: f ax, sl, lg-pd: pd re f. 2—3 i. S.
 SYMPHO'RIA. 5—1. 58. Gr. *sumphoreo*, cluster. Peterwort.
 1 *racemosa*, r. Au. h. r tm: co b. 2—3 f. Rochester.
 2 *glomerata*, g-r. Au. h. r ax, capitate, glm. 3 to 4 f.
 SYM'PHYTUM. 5—1. 43. Gr. *sumphūton*, of *sun*, and *phuō*, grow together. Comfrey.
 1 *officinale*, y-w. J. 2f. l o-sub-ln, de rg. 2 to 4 f. E.
 SYNAN'DRA. 13—1. 42. Gr. *sun*, together, and *aner*, stamens.
 1 *grandiflora*, y-w. J. 2f? st sulcate: l sub-hir ab, lr-o, ac, ot dt; lower sub-pc: up ss, cls: f sl, ss. 1 f. S.
 SYRIN'GA. 2—1. 34. Gr. *suriax*, a pipe. Lilac.
 1 *vulgaris*, b-p. w. M. h. l cor: f thyrse. E.
 2 *persica*, b. w. M. h. l ln, en pnt.
 3 *chinensis*, b. M. h. l ln: brh mottled.
 TAGE'TES. 17—9. 55. Tages, a Tuscan divinity. Marigold.
 1 *erecta*, y. Ju. ☼. l pnt; l ln, cil-sr: pd l-f, sub-inf: c an.
 2 *patula*, y. Ju. ☼. l pnt; l ln, cil-sr: pd l-f: c so: st spr.
 TALI'NUM. 11—1. 86. Gr. *thallo*, green.
 1 *teretifolium*, p. Ju. 2f. l cy, sb: pd el, na cymed. 4—10 i.
 TANACE'TUM. 17—2. 55. *Athanasia*, ancient name for tansey.
 1 *huronensis*, y. 2f. l bipnt, gh-sr, sub-tom be: pe thick: ray-f 4-5-cleft.
 2 *vulgare*, y. Ju. 2f. l 2-pnt, gh sr. V. *crispa*, dense. E.
 TAX'US. 20—15. 100. Lat. *taxus*, ancient name for yew tree. Shin-wood. Dwarf yew. False hemlock tree.
 1 *canadensis*, O. Ap. h. l li, 2-rank, mr rev: rec of s f glo. 2—6 f.
 2 *baccata*, h. l li, 2-rank, flat: rec of s f glo.
 TET'RAGONOTHE'CA. 17—2. 55. Gr. *tetragon*, quadrangular, and *theka*, case.
 1 *helianthoides*, y. J. 2f. sca: l op, ss, ln-spt, to, pilose, gld-pnt. 2—3 f.
 TEU'CRUM. 13—1. 42. Teucer, founder of Troy. Wood-sage.
 1 *canadense*, O. r. Ju. 2f. pu: l ln, sr' pe: st e: sk wr, crd. 1—3 f.
 2 *laciniatum*, sm h: l pnt 5-par; up 3-par; di li: fax, sl pe; sh l.
 THA'LIA. 1—1. 21. John Thalius.
 1 *dealbarta*, p. Au. 2f. pn white-pulverulent: spa 2-f: l o, rev summit. S.
 THALIC'TRUM. 12—13. 61. Gr. *thallo*, green. Meadow-rue.
 1 *dioicum*, O. w-r. M. 2f. f die: s fi: l dec, 3-ter; l rd, cor, ot lo, g: pd ax, sh than l. 1—2 f.
 2 *revolutum*, O. w. Au. 2f. f die pol: s fi: l 3-lo; mr rx pu be.
 3 *carolinianum*, w. J. 2f. f die, s fi: l o, 3-5-to, g, gl be: pd ax, lg l.
 4 *rugosum*, w. J. 2f. st e, t: pn e, di: f crd: l o, sub-cor, cre. 2—5 f.
 5 *cornuti*, g-y. Ju. 2f. l dec: l o, 3-cleft: pn tm. 2—3 f.
 6 *corynellum*, w. Ju. 2f. f pol: fi clavate: fru ss, fur, l 3-lo. 3—4 f.
 7 *purpurascens*, J. 2f. st twice high l: l rd, 3-cleft, gh: pn na: f no.
 8 *ranunculinum*, l si, 5-lo, sr: f cmb. S.

- 9 *clavatum*, 2f. fi club-form: pr cp, beaked sh style: 1 g, w stipes.
 THAP'SIA. 5—2. 60. Thapsus, an island.
- 1 *trifoliata*, y. 2f. pe jt of st pu: 1 ter biter; 1 wd o, uneq gh sr, en at.
 base: u tm: par inv 3-l, sb. 3 f.
- 2 *acaulis*, w. J. 2f. g, st-less: 1 bipnt, 1 li, sep sh rad l. 2—3 i. S.
 THE'A. 12—1. 70. Gr. *thca*, Chinese Teha. Tea.
- 1 *bohea*, h. f 6-pt: 1 ol-ov, rg. E.
- 2 *viridis*, h. f 9-pt: 1 lg-ov. Perhaps a variety.
- THE'R'MIA. 10—1. 93. Gr. *thermos*, lupine. False lupine.
- 1 *rhombifolia*, y. 2f. 1 rh-o, sm wd, pu be, ot: sti l, rd o, sh pe. S.
 THE'SIUM. 5—1. 25. Gr. *theseion*, garland. False toad-flax.
- 1 *umbellatum*, O. w-g. J. 2f. e: 1 ol: u ax, sm ab ax: 3-5-f, f bt. 9—15 i.
 THLAS'PI. 14—1. 63. Gr. *thlaō*, to break. Shedherd purse.
- 1 *arvense*, J. ☼. sub-or, cp, so: 1 ol, to, g. Penny cress.
- 2 *alliaceum*, ☼. silicle sub-o, inf: 1 ol, ot, to, g.
- 3 *tuberosum*, silicle sub-or, sh, cp: 1 rh o, os to, so, ss; rad lg-pe: st pu, sh si: ro tub fi. 4—5 i.
- 4 *campestre*, O. J. ☼. sil obcor, inf, gld-pte: cau l ar, to. Yellow seed.
- 5 *bur'sa-pasto'ris*, O. w. M. ☼. hir: silicles obcor: rad l pnt.
- 6 *alpestre*, 1 en to; rad o, pe; cau ol, cls: pt eq c: sil obcor 10 seeds.
 THU'JA. 19—16. 100. Gr. *thuion*, sacrifice. Arbor vitæ.
- 1 *occidentalis*, M. h. brh 2-edged: 1 im 4-ways, rh-o, cp, na, tubercled:
 strobiles ob; inner scales tru inf below apx.
- THY'MUS. 13—1. 42. Gr. *thumos*, cordial. Thyme.
- 1 *serpyllus*, b-p. J. h. fin hd: st crp: 1 flat, ot, cil at base. E.
- 2 *vulgaris*, b-p. J. 2f. h. e: prt at base: 1 o li: f wr sk.
- 3 *lanuginosus*, 2f. h. fin hd: st crp, hir: 1 ot, v.
- THY'SANOCAR'PUS. 14—1. 63. Gr. *thusanos*, fringe, and *karpos*, fruit.
- 1 *curcipes*, fr, sml: silicle pnd: st sl, e: 1 rad, pnt. Rocky Mt.
- TIAREL'LA. 10—2. 84. *Tiaras*, ornament for the head. Mitre-wort.
- 1 *cordifolia*, w. M. 2f. 1 cor, a-lo, to: teeth m: sep r. 10 i.
- 2 *menziesii*, 2f. 1 o, cor, a, sh-lo, to; cau al: r fi, sm sk: c tubular. 1 f.
- 3 *trifoliata*, 2f. 1 ter; 1 sub-rh, sr, pilose: r tm; cmb of f al: c bl.
- 4 *bracteata*, 2f. 1 rd-cor, gh-sr; sr m: sep r: f pentan, bt: pt nr.
- 5 *biternata*, y-w. J. 2f. 1 biter; 1 hr-o, gh-lo, to: st l: pn tm, div,
 f sm sk. S.
- TIGA'REA. 11—1. 92. Tiger's teeth.
- 1 *tridentata*, y. Ju. h. 1 crd end, brh, obcu, 3-to, v ab, tom be: f tmsl. S.
- TIL'IA. 12—1. 79. Lat. *tilia*, Linde. Bass-wood.
- 1 *glabra*, O. y-w. Ju. h. 1 rd-cor, ac, sr, sub-cr, g: pt tru at apx, cre:
 style eq nt: nut o. 40 to 80 f.
- 2 *laxiflora*, h. 1 cor, ac, to, mem, g: pn lax-f: pt em, sh style: nut glo.
- 3 *pubescens*, y-w. Ju. h. 1 tru at base, ac, to-sr, pu be: pn dense-f: pt
 eq to style: nut glo, so. V. 1 lax, sr, sm mem.
- 4 *heterophylla*, J. h. 1 o, oblique base eq tru cor, sr, tom be: nut-glo. S.
- TILLÆ'A. 4—4. 86. Tilli. Pigmy-weed.
- 1 *ascendens*, w. st as, ro lower jt: 1 con, sb, fleshy: fax, sl, ss.
- TILLAND'SIA. 6—1. 15. Tillands. Wild pine.
- 1 *utriculata*, w, 1 sm gl, concave br, sb, se at apx, ac, re dilated base: pn
 brh: fss: bt sm 2-rank, sh c: pt twice lg c, e eq. 3 f. S.
- 2 *jun'cea*, b. st l: 1 lg st, sh towards top, sm sb-se, re at apx, dilated
 base: sk com, my-f, dist: bt im, lg c. 1 f.

- 3 *prinifolia*, b. st l: 1 eq st, sh top, sub-pu, sb-se, t, e, concave base: sk si, few-f: bt sh, im: pt im tube, lg bt dilated middle, re at apx. 5 i.
- 4 *bar'trami*, b. st l; 1 lg st sh towards top, pu, sb-se, t, e, dilated at base: sk si, 6-8-f, 2-ranked: bt im: pt equi tube, dilated in middle. 10 i.
- 5 *caespitosa*, b. st scaly l: 1 lg st, pu, sb-se, t, e, sm base: sk 3-4-f. 4 i.
- 6 *recurvata*, 1 sh st, t, sb, se, pu, nr: st na, ab, 1-2-f: f ss: co lg c. 6 i.
- 7 *uncoides*, g. pu: st diffuse, fi, pn, brh, dic, fl: 1 sb-fi, t, twisted: f tm, sl, ss: c g, rusty, 3-par: di sb, a, e: pt 3, br-li, rd at apx.
- TIPULA'RIA. 18—1. 21. *Tipula*, crane fly.
- 1 *discolor*, w. Au. 1 sl, plaited n: fr, no, bt-less.
- TOFIEL'DIA. 6—3. 13. Mr. Tofield.
- 1 *pubens*, g-w. Au. 2f. scp sca: sk ol, int: cps sub-glo, lg c. 12—18 i.
- 2 *glutinosa*, 2f. scp pe sca: sk with al fas: cps egg-form, twice lg c.
- 3 *pusilla*, g-w. J. 2f. g: 1 sh: scp fi: sk few-f, glo: c adnate to rachis:
- 4 *glabra*, g-w. scp t, so: 1 li: sk sh, dense, ol: bt a, sml: pd sl, an, lg f: styles 0: cps mem, eq co. 8—10 i. S.
- 5 *glaberrima*, w. Oc. 2f. g: fr: buds apx, wr, 1-f. 2—3 f.
- TOR'REYA. Ea. 11—1. 88. Prof. John Torrey.
- 1 *ornata*, y-w. 2f? 1 ln. int pnt: seg sub-a: base of cps, 5 to 7-va: seed w mr. 2 to 4 feet high. Flr, sl tm, ss. Missouri. S.
- 2 *nuda*, y-w. 2f. 1 sub-ln, int pnt, seg ot: cps na, 3-va: seed mr.
- TRADESCAN'TIA. 6—1. 13. Tradescants. Spider-wort.
- 1 *virginica*, b. p. M. 2f. e. brh: 1 ln, el, g: f ss: pd el: u com, pu. 1-2 f.
- 2 *rosea*, r. M. 2f. e, si: 1 ln-li: pd el: c so. 8—12 i.
- TRA'GIA. 19. 3. 96. Hieronymus Tragus.
- 1 *ramosa*, st her, pilose, brh: 1 pe, ln-o, sr, hir be, sub-cor at baee. 8 i.
- 2 *urens*, Ju. 2f. e: 1 ln, ss, ot, sub dt at apex: st brh pu. 12—18 i. S.
- 3 *urticifolia*, Ju.  1 cor, o, sr: st e, hir. 12—18 i.
- 4 *macrocarpa*, Ju.  cli, his: 1 cor, o, a to.
- TRAGOPO'GON. 17—1. 53. Gr. *tragos*, a goat, and *pogon*, beard. Vegetable oysters. Goat beard. Salsafy.
- 1 *porrifolius*, p. Ju.  c lg rays of co; co nr, tru: pd. E.
- TRE'POCAR'PUS. 5—2. 60. Gr. *trepo*, to turn, and *karpos*, fruit.
- 1 *aethusa*, u 5-rayed: fru 4 times lg as br: 1 my-cleft, li lo. S.
- 2 *brachycarpus*, u 2-3-rayed: fru 3 times lg as br.
- TRIB'ULUS. 10—1. 81. Gr. *tribolos*, thistle.
- 1 *maximus*, y. Ju. 1 pnt; 1 4 pa, outer lr: pr 10-seeded, not sp. 1-2 f. S.
- 2 *trijugatus*, y.  1 3 pa: tm lr, pu be: cps 5, 1-seeded, m, sp-less.
- TRI'CHOCHLO'A. 3—2. 10. Gr. *thrix* (*trichos*) hair, and *chloa*, green herbage.
- 1 *capillaris*, 2f. 1 fi, so: pn diffuse, cap: pe lg than awns. 2 f.
- TRICHO'DIUM. 3—2. 10. Gr. *thrix* (*trichos*) hair.
- 1 *laxiflorum*, 2f. culm e: 1 se she sm sca: pn diffuse, cap, tric brh. 18 i.
- 2 *scabrum*, Ju. 2f. culm knee bph: 1 ln-li, flat, striate, sca: she so: pn wr div: c uneq: c o, a, 3-n. 12—18 i.
- 3 *elatum*, Au. 2f. culm e, firm: 1 nr-li, flat, sca: she so: pn wr. 3 f.
- 4 *montanum*, Ju. 2f. culm ces, e: 1 inv-fi with she sca: pn cap. 9—12 i.
- 5 *perenneum*, 2f. culm dc: pn sm diffuse; brh wr tric: fr. 1—2 f.
- TRI'CHOPHYLLUM. 17—2. 55. Gr. *thrix* (*trichos*) hair, and *phullon*, a leaf.
- 1 *lanatum*, y. Ju. 2f. woolly, pnt. See Actinella.
- 2 *oppositifolium*, Ju. 2f? dc, brh: sh pu: 1 op, pal-3-cleft. 6—12 i. S.

TRI'CHOSTE'MA. 13—1. 42. Gr. *thrix* (*trichos*) hair, and *stēma*, stamens. Blue curls.

1 *dichotoma*, b. Au. ☼. 1 ln-o: brh f, 2-forked: slg, blue, curved. 6—12 i.

TRIENTA'LIS. 7—1. 35. Lat. *triens*, the third, or third of a foot high. Chick wintergreen.

1 *americana*, O. w. Ju. 2f. 1 ln, sr, ac: pt ac. 3—6 i.

TRIFO'LIUM. 16—10. 93. Lat. *tres*, three, and *folium*, leaf. Clover.

1 *reflexum*, r. J. 2f. prt, pu: 1 ob: sti cor: hd my-f: f pe. 12—18 i.

2 *repens*, O. w. M. 2f. crp: 1 o-ol, em, sr: f in u hd: teeth of c sub-eq.

3 *pratense*, O. r. M. 2f. as, so: 1 o, sub-en: sti awned: sk o: lower to of c sh than tube of co, lg teeth. 2—3 f.

4 *pennsylvanicum*, r. J. 2f. as: st brh, zigzag: 1 ov-o, ot, en: sti awned: sk o cy, dense, sl: lower to of c sh tube of co.

5 *arvense*, O. w. Ju. ☼ e, brh, v: 1 li-obln: sk v, ov-cy. 6—10 i.

6 *agrarium*, y. J. ☼ e, sub-pu: 1 ln-wd, ot, middle ss: sti ln, a.

7 *procumbens*, y. J. ☼ prt: st h: 1 ob, sub-m, g: sti sh, ln, a. 3—6 i.

8 *campestre*, y. ☼. sk o, im: banner per; 1 ln-o, middle pe: st spr, ban rx.

9 *stoloniferum*, w. J. 2f. sg from base of st: 1 ob, uneq sr on sides, to at end: teeth of c nr-lu or sb, lg tube: f lr, in hd sk.

10 *altissimum*, g: st e, tall: 1 ln-li, to, pe lg; up 1 sub-ss: stiln-ac.

11 *spinulosum*, prt, g: 1 ol, a both ends, sp-to: sti o ac, sp-sr: inv 1-l: hd sub-glo, sh: c sh than co.

12 *cyathiferum*, prt, ram, g: 1 ol, or ob, m, sp-to: inv lr, 1-l, cap-form.

13 *involutatum*, ☼. hd rd, pd: sur or to rec: sti ol, awn, to: st e, brh.

14 *nanum*, p. 2f. hd few-f, u: le 4-5-seeded: c g: teeth eq. 1—2 i.

15 *carolinianum*, p-w. Ap. 2f sml, prt: 1 obcor, up em h to: sti 2-cleft: u capitate, pd, few-f: co ex: le 3-4-seeded. 3—10 i. S.

16 *microcephalum*, w-p. Ju. 2f. as, pu: 1 ob, em, dt: sti o, ac: hd sml.

TRIGLO'CHIN. 6—3. 7. Gr. *trcis*, three, and *glochis*, an angle. Arrow-grass.

1 *maritimum*, g. Ju. 2f. fru o-ol, of 6 cps. Cps vary in nm 3-6. 9—15 i.

2 *palustre*, g. Ju. 2f. ftian: fru 3 cps, li, ta at base. 6 to 12 i.

3 *triandrum*, Ju. trian: f 3-cleft, sh-pd: cps rd trian: 1 sub-se. 6 to 9 i.

TRIGONEL'LA. 16—10. 93. Lat. *trigona*, triangular. Funegreek.

1 *fœnum-græcum*, ☼. le ss, sl, e, fal, ac: st e: 1 wd-ol. E.

2 *sericca*, y. Ju. ☼. 1 ter, ss, ol, a, v: pdax, 1-f, lg l: f 1-bt. S.

TRIL'LIUM. 6—3. 12. Lat. *trilix*, triple. Wake robbin.

1 *ses'sile*, p. M. 2f. f ss, e: pt ln, e, twice lg as c: 1 ss, br-o, a. 8—10 i.

2 *pctiolatum*, p. J. 2f. f ss, e: pt ln-li, e, lg c: 1 lg-pe, ln-ov, a.

3 *erythrocarpum*, w. & r. M. 2f. pd e: pt ln-o, ac, re, twice lg nr-l-c: 1 o, ac, rd base, pe. Smiling robin. 8 i.

4 *pusil'lum*, r. M. 2f. pd e; pt lg c: 1 ov-ol, ot, ss.

5 *pendu'lum*, w. M. 2f. pd f pnd, pt flat, o, sh ac, eqc: c o-ac: 1 rd-rh.

6 *purpu'rcum*, p. 1 spt-o, ac, net-ve: f pd, no: pt lr c.

7 *erectum*, p. w-y. 2f. pd e, f no: pt o, ac, spr, eq c: 1 rh, ac, ss. 9—16 i.

8 *ovatum*, r-w. 2f. pd e: pt ob, ot, flat, spr, lg or br c: 1 rh-o, ac ss.

9 *grandiflorum*, w. 2f. pd curved, f no: pt ln-spt, connivent base, lr c: 1 br-rh-o. Ber dark purple 1 f.

10 *cer'nuum*, r-w. M. 2f. pd re: pt ln, ac, lr c: 1 ob ov ta. 12—18 i. S.

11 *stylosum*, A. r-w. pd sh f, re: pt spr, ol, ot, lr c: style 1. 8—10 i.

12 *nervosum*, r-w. Ap. pd re: pt ln-ol, lr c: 1 ln o, a at each end. 6—8 i.

13 *ovatum*, p. Ap. 2f. pd e: pt ol, a, spr, lg li c: 1 o, a, close ss.

- TRIOS'TEUM. 5—1. 58. Gr. *treis*, three, and *osteon*, bone. Fever root, horse ginseng.
 1 *perfoliatum*, O. p. J. 2f. l ov, ac, sub-pu be: f ss, wr: ber y or p. 2-4 f.
 2 *angustifolium*, y. Ju. 2f. l ln-ov, sub-con pd op, l-f: st lis. 2—3 f. S.
- TRIPHO'RA. 18—1. 21. Contracted from *trianthophorus*, bearing three flowers. Three-bird orchis.
 1 *pendula*, w-p. Au. 2f. ro tub: st l, 3-f at top: l cls, o, al; lip-en. 4-6 i.
 TRIP'SACUM. 19—3. 10. Gr. *tripsis*, grinding. Sesame grass.
 1 *dactyloides*, J. 2f. sk nm, (3—4,) f s near summit; p below. 3—5 f.
 2 *cylindricum*, sk sl, cy, in sh jts; f per. S.
- TRIPTEREL'LA. 3—1. 18. Gr. *treis*, three, and *pterus*, wing.
 1 *capitata*, w. J. ☼. f tun hd. an of gm scarcely wi. 6—8 i. S.
 2 *coerulea*, b. ☼? f few tm r: an of gm wi. 2—4 i.
- TRISE'TUM. 3—2. 10. Lat. *tres*, three, and *seta*, bristle.
 1 *palustre*, J. 2f. pn no, sm wr: c 2-3-f: f so, ac; lowerawnless. 1--2 f.
 2 *purpurescens*, 2f. pn si, sm r, few-f: c few-f: glu uneq, en: l so. 2 f.
 3 *subspicatum*, 2f. pn sm sk: awn at lg rx, exceeding c.
- TRIT'ICUM. 3—2. 10. Lat. *tritum*, ground. Wheat.
 1 *pauciflorum*, sk si, e: sk 2-f: culm si, l, t, striate, so: l sm gl. 2 f.
 2 *hybernium*, J. ♂. c-glu 4-f, tumid, im, with sh cp point: sti jagged. E.
 3 *æstivum*, J. ☼. c 4-f, tumid, so, im, awned. Is this a Var?
 4 *compositum*, sk com; sk crd, awned. Egyptian wheat.
- TROL'LIIUS. 12—13. 61. German, *trollen*, to roll. Globe flower.
 1 *laxus*, y. M. 2f. pt 5, ol, spr: ne sh s: pt 5, ob: cap sh: crown stage.
- TROPEO'LUM. 8—1. 73. Gr. *tropaion*, a trophy.
 1 *majus*, y. r. Ju. ☼. 2f. l peltate, sub-re: pt ot. E.
- TROXI'MON. 17—1. 53. Gr. *trōximōn*, eatable.
 2 *glaucum*, y. Ju. ♂. scp l-f, g: l ln-li, flat, en, gl both sides. S.
 3 *cuspidatum*, y. M. scp l-f, sub-pu: l li, tom on mr: di of c im, g.
- TU'LIPA. 6—1. 14. Persian, *tulipes*, turban.
 1 *suave'olens*, sweet tulip. 2f. sml: st l-f, pu: fe: pt ot, g: l ln-o. E.
 2 *gesneriana*, common tulip. 2f. st l-f, g: f cl, e: pt ot, g: l ln-o.
- TUL'LIA. 13—1. 42. Prof. Tully. False mt. mint.
 1 *pyncan'themoides*, r-p. Au. 2f. l o, ac, ta to base, rt to. 2—3 f. S.
- TURNERA. 5—3. 79. Dr. William Turner.
 1 *cistoides*, y. Ju. ☼. pd ax, l: l sr at summit.
- TURRI'TIS. 14—2. 63. Lat. *turris*, a tower.
 1 *ovata*, w. M. ♂. pu: rad l pe, o, to, ot; cau l cls, ol, sr, a.
 2 *glabra*, e: rad l pe, to, brh h; up br-ln, g, half cls, gl: pod nr li, e.
 3 *stricta*, e, g. l lu; rad pe-to; cau half-cls, sub-dt: f and siliques li.
 4 *retrofracta*, e, white-pu or g: l ln; rad pe, to; cau sagittate, half-cls.
- TUSSICA'GO. 17—2. 55. Lat. *tussis*, a cough, and *ago*, to drive.---
 Colt's foot.
 1 *far'fara*, y. Ap. 2f. scp l-f, scaly: l cor, an, to, d be. 4—6 f.
 2 *frigida*, y. M. 2f. thyse fs: f rays: l rd-cor, uneq to, tom be.
 3 *sagittata*, W. 2f. thyse o, fs: f rays: l rad, ol, a, saggitate en: lo ot.
 4 *palmata*, Ap. 2f. thyse fs: f os raws: l rd-cor, half 7-lo, gh-to.
- TY'PHA. 19 3. 8. Gr. *typos*, a bog. Cat-tail.
 1 *latifolia*, O. Ju. 2f. l li, flat, convex be: s and p aments close together.
 2 *angustifolia*, Ju. 2f. l li fur, semi-cy below, flat ab: s p aments separ.
- U'LEX. 16—10. 93. Celtic, *ec* or *ac*, a point. Furze.
 1 *europæ'us*, M. ♂. l ln-li, v: bt o, lax: bt e. E.

UL^{MUS}. 5—2. 99. Lat. *ulmus*, Celt. *elm*. Elm.

1 *americana*, O. g-p. Ap. $\frac{1}{2}$. brh so: 1 oblique at base, ac. 40—70 f.

2 *fulva*, O. Ap. $\frac{1}{2}$. brh sca, whitish: 1 o-ol, ac, eq at base. 20—40 f.

3 *nemorialis*, Ap. $\frac{1}{2}$: 1 ol, so, eq er, eq at base: f ss.

4 *racemosa*, $\frac{1}{2}$. f in r, pd in fas: 1 o, ac, 2-sr, g ab, pu be: stg rc.

5 *alata*, M. $\frac{1}{2}$. brh each side wi, with a cork-like bark: 1 ol-o, a. 30 f. S.

UL^{VA}. 21—4. 2. Gr. *uliai*, parings of hides.

1 *bullosa*, fr ob, slippery: sin blistered, finally expanded. 6 i.

2 *laciniata*, fr flat, with nm dilated seg.

UNI^{OLA}. 3—2. 10. Lat. *unus*, one. Sea oats 5.

1 *latifolia*, Ap. $\frac{1}{2}$. 1 br, flat: pn loose, no: sk lg-pd: f sub-falcate. 4 f.

2 *gracilis*, Au. $\frac{1}{2}$. pn el, ap: sk 3-f: f spr, monan; lowest ab. 3—4 f.

3 *spicata*, Au. $\frac{1}{2}$. pn sk, straight: 1 spr: sk 5—9-f: f trian. 18 i.

4 *stricta*, $\frac{1}{2}$. so: 1 nr, e: pn e: sk li-ol, my-f: f straight, awnless. 1 f.

5 *paniculata*, Ju. $\frac{1}{2}$. pn lr, cp: sk sub-ss, c 4—5-va. 4—8 f. S.

6 *nitida*, Ju. 1 flat, nr: pn sc, spr: sk few, sub-ss: c 3-va. 2—5 f.

URALEP^{SIS}. 3—2. 10. Gr. *oura*, a tail, and *lepis*, a scale.

1 *aristulata*, Au. \odot . lt pn in she of l: tm ex: c 3-f: brs of c lg lt b. 1 f.

2 *purpurea*, \odot ? 1 sb: pn sml, r: co v; outer va twice lg c. 2 f. S.

3 *cornuta*, culm and 1 nr, pilose: pn slender: awn of co lg v. 2 f.

URASPER^{MUM}. 5—2. 60. Gr. *oura*, a tail, and *sperma*, a seed.---

Sweet cicily.

1 *claytoni*, O. J. $\frac{1}{2}$. 1 com, h; 1 gh-to: u ax and tm, 5-rayed. 2 f.

2 *hirsutum*, J. $\frac{1}{2}$. hir: 1 dec; 1 gh-pnt: styles of frupy, apx.

3 *procumbens*, \odot . st pc: 1 dec; di ln, ot: u 3-rayed: fru so. 6—12 i.

4 *canadense*, O. w. J. $\frac{1}{2}$. st g: 1 ter, so: 1 rh-o, a, gh-to: fru ol. 1—2 f.

URE^{DO}. 21—6. 1. Lat. *uredo*, blasting. Rust fungus.

1 *linearis*, J. \odot . li lg, yellow, at length obscurely cl.

2 *segetum*, smut. J. dust black, copious, on sk and glu of grain.

URTI^{CA}. 19—4. 98. Lat. *uro*, to burn. Nettle. Albany hemp.

1 *pumila*, O. Ju. \odot . 1 op, o, ac, 3-n, sr; lower pe lg as l. 8—12 i.

2 *urens*, J. \odot . 1 op, ov, 5-n, sr: sk glm, in pa. 9—14 i.

3 *dioica*, O. J. $\frac{1}{2}$. 1 op, cor, ln-o, sr: r die: sk pn, glm, pa. 2—3 f.

4 *procera*, O. Ju. $\frac{1}{2}$. 1 op, cor, ln-o, sr: pe cil: f die, sk sm brh. 3—4 f.

5 *capitata*, J. $\frac{1}{2}$. 1 al, hr-o, ac, sr, 3-n, twice lg as pe: glm sk. 4—5 f.

6 *canadensis*, Ju. $\frac{1}{2}$. 1 al, hr-o, ac. sr, his both sides: pn ax, in pa, spr-hrh; s lg pe; up p el: st covered stings, 5---6 feet.

7 *chamocedroides*, M. \odot . 1 op, sub-ss, o, sr be: clusters of f ax. 4---6 f.

US^{NEA}. 21—5. 2. Lat. *ustionis*, of uro, burning or combustible.

1 *florida*, rec e, rg: greenish-gray, with nin fine fibres, br, si rec be, cil.

2 *plicata*, fr pnd, so: pale, brh lax, di fi, ult cap, rec plane, brh, cil lg.

UTRICULA^{RIA}. 2—1, 35. Lat. *utriculus*, a little bladder. Bladderwort. Millfoil.

1 *ceratophylla*, y. Ju. $\frac{1}{2}$. 1 inf, 6-wr, brh, cap fi on sides: f sub-cmb. 8 i.

2 *macrorrhiza*, y. J. $\frac{1}{2}$. 1-less, floating: scp my-f, lr scales: f r: up lip of co sub-3-lo; lip en: palate lr, stripes: spur el, ot em. 6---8 i.

3 *striata*, y. J. \odot . 1-less, floating: scp 1---2 scales, 5---6-f: up lip co br.

4 *gibba*, y. Ju. $\frac{1}{2}$. 1-less, floating: scp na: up lip of co em. 1---3 i.

5 *fornicata*, y. An. \odot . 1-less, floating: scp na, 1---2-f: up lip of co 3-lo.

6 *purpurca*, p. Au. $\frac{1}{2}$. 1-less, floating: scp 2---3-f: up lip of co tru, em.

7 *personata*, y. \odot . 1-less, ro; scp scales, my-f: f r: up lip co em rx.

- 8 *setacea*, y. J. ☼. l-less, ro: scp scales, se, my-f: up lip of co sh, en.
 9 *cornuta*, y. J. ☼. spur-ne sb, lg co, a: lower lip of co br, 3-lo: scp ss.
 10 *longirostris*, y. ☼. l-less, floating: scp scales, spur ln. 1--2-f. S.
 11 *integra*, y. ☼. l-less, floating: scp scales, 1--2-f: up lip co sub-3-lo.
 12 *fibrosa*, y. scp 2-f: flr: spur ot: l ro-shaped, fi.
 13 *biflora*, y. Ju. ne sb, eq up lip: scp-2-f: l se.
 UVULA'RIA. 6—1. 12. Lat. *urula*, throat. Bell-wort.
 1 *perfoliata*, O. y. M. ☼. l prf, ov, ot, ln-li or ov-ol young. 8--12 i.
 2 *flava*, y. M. ☼. l prf ov-ol, co ta base, sca within: anthers cuspidate.
 3 *grandiflora*, y. J. ☼. l prf ol, a: pt so: anth ot: ne rd: flr. 9—15 i.
 4 *sessilifolia*, O. y. M. ☼. l ss, lo-ov, gl be: pt flat, so within. 8—12 i.
 5 *puberu'l*, l ov, rd at base, sm cls alike: cap ss, o. S.
 VACCINI'UM. 10—1. 51. Lat. *vaccinium*, bilberry. Whortleberry.—
 Bilberry. Squaw-berry.
 1 *stamin'eum*, O. w. M. ☼. l ov, a, en, gl be: pd sl, ax, fi; co spr, bl.
 2 *dumo'sum*, O. w. J. ☼. resinous specks his; l ol ob, a at base, m, en,
 sides cl alike: r bt: pe sh, ax, sub-sl: co bl-form; di rd. 12—18 i.
 3 *frondosum*, O. w. M. ☼. l ol-o, ot, en, g, gl be, my dots: r lax, bt: pe
 lg, fi, bt: bt li: co o-bl-form with a di: V. ln l a ends: ber bluc 3f.
 4 *resinosum*, O. p. M. ☼. l pe, ol, ol-ov, ot, en resin dots: r lt, 1—4 f.
 5 *corymbosum*, O. w. M. ☼. f brh w l: l ol-ov, a at both ends, m, sub-
 en, sub-tom be, h both sides when young, g ab, h ve be. 4—12 i.
 6 *pennsylvanicum*, O. r. g. M. ☼. brh an ab: bark green: l sub-ss, ln-ov,
 m, sr, both sides shining: fas of f crd, sub-tm: co o, 5-to. 12—18 i.
 7 *virgatum*, J. ☼. l ov, a, so, sr, en: f brh el, with ss r: co o.
 8 *ligustri'num*, p. r. J. ☼. brh an: l sub-ss, e, ln, m, sr: fas ss: fsm ss.
 9 *tenu'llum*, r-w. M. ☼. r bt, ss: cocy-o: l ol-ov, sm wd-sr.
 10 *uliginosum*, r-w. Ap. ☼. l ob, ot, entire, g ab, pu and gl be. 1—2 f.
 11 *myrtiloi'des*, Ap. ☼. l nr, ln, mem, en, pu on mr be: f sc, sub-sl.
 12 *caespitosum*, ☼. sml, ces, g: l wd-ob, rd ot, sr, mem: f on brh sl. 3i.
 13 *vi'tis-i'dea*, w-r. M. ☼. low: st crp, brh e: l ob, em, sub-sr g ab, r no.
 14 *ovatum*, M. ☼. l pe, o, a, sr, g, cr: r ax and tm, bt, sh: cocy: c a.
 15 *obtusum*, ☼. crp: l sml, ov, rd-ot at end, m, en, g, cr: pd ax, sl, l f.
 16 *arbo'reum*, w. M. ☼. l pe, ob, a 2-ends, m, gld-sr, shining ab. 8—20 f.
 17 *pal'lidum*, ☼. l o, a, sr, g: r bt: cocy-bl-form.
 18 *galezans*, y-w. M. ☼. l ss, wd-ln, sub-sr, ve, pu: fas ss: pe sh: c ac.
 19 *myrtifolium* ☼. crp, g: l pe, ov, rev, dt: fas ax, sub-ss, few-f, co glo.
 20 *crassifolium*, r. J. ☼. diffuse: brh as, lax: l ln-ol, a cnd, sr, g, cmb.
 21 *ni'tidum*, r. M. ☼. e, brh: brh 2-rank: l g ov-ol, a at each cnd, g: sr.
 22 *myrsinitis*, p. M. ☼. e, brh, sml-l: l ss, ov, m, sub-sr, so ab, pte un.
 23 *buxifolium*, w. J. ☼. low: l ob, cre-to, g: fas crd, sub-ss, ax and tm.
 VAGINA'RIA. 3—1. 9. Lat. *vagina*, a sheath.
 1 *seirpoides*, ☼. culm l-less, she: sk o,*sub-sl; sca ln-spt. 12—18 i. S.
 VALERIA'NA. 3—1. 56. Lat. *valeo*, to be powerful. Valerian.
 1 *dioica*, r. J. ☼. g: rad l sub-spt-o, en, lg pe; cau few, pnt: di ln en.
 2 *pauciflora*, w. J. ☼. lower l pnt; up ter; l ov, a, sr: pn lax, few-f. 3 f.
 3 *phu*; ☼. cau l pnt, rad undi: st so. E.
 VAL'ISNE'RIA. 20—2. 22. Anthony Vallisneri. False eelgrass.
 1 *spiralis*, w. Au. ☼. l floating, li, ot, sr at summit, ta at base.
 VERA'TRUM. 6—3. 13. Lat. *vere atrum*, truly black. Itch-weed.
 1 *viride*, O. g. J. ☼. r pn; bt brh ln-ol, bt f lg sub-pu pd: l br-o. 3—5 f.
 2 *angustifolium*, g-y. J. ☼. f mo die: pn si: pt li: l lg-li, ke.

- 3 *parviflorum*, A. g. Ju. 1 ln-ov, flat, g: pn spr: pt a each end. S.
 VERBAS'CUM. 5—1. 38. Lat. *barbascum*, from *barba*, a beard. Mul
 lein. Moth Mullein.
- 1 *thapsus*, O. y. J. ♂. 1 de, d sides: st si, sm brh ab: f cy-sk. 3—6 f.
 2 *blatta'ria*, w-y. J. ♀. 1 g, to-sr; lower ol-ob; up hr-o, cls. 2—3 f.
 3 *lychni'tis*, y. J. ♂. 1 ol-wd, d be: sk lax, lt tm.
- VERBE'NA. 13—1. 41. Lat. *verbena*, from Celt. *ferfaen*, to remove the
 stone. Veivain. Simpler's joy.
- 1 *spuria*, b. Ju. 2f. ♂. st dc, spr brh: 1 my-cleft di: sk fi. 1—2 f.
 2 *hastata*, O. p-w. Ju. 2f. e, tall: 1 ln, ac. gh-sr; lower sm gh. 2—5 f.
 3 *urticifolia*, O. w. Ju. 2f. e, sub-pu: 1 o, a, sr, pe: sk fi, ax tm. 2—4 f.
 4 *angustifolia*, b. J. 2f. low, e: 1 ln-li, ta to base, sr, chan ve. 1 f.
 5 *auble'tia*, O. p. M. 2f. sk sl, im, lg-pd: di of co em: 1 ov, sr di, pe. S.
 6 *bracteosa*, p. Ju. 2f. sml, dc, hir: 1 ln: f sk, sub-im: sk squarose lg-li.
 7 *pamiculata*, Ap. Ju. 2f. e, sm sca: 1 ln, sr, undi: sk fi, im, cm-pn. 4-6 f.
 8 *diffusa*, p. 2f. e, brh: 1 ln-o, sr, sub-pu: sk lg, pu; very diffuse.
 9 *caroliniana*, p. J. 2f. e, sca: 1 ol-ob, ot, uneq sr, ta to base, sub-ss: sk
 lg, fi: f distinct. 2 f.
- 10 *etricka*, b. Ju. 2f. hir, hoary: st e: 1 ss, ob, sr, sub-tom, hir: sk
 straight, im, sm fas. V. p. st e, si, t, v: 1 o, a, uneq gh-to; teeth a.
- 11 *bipinnatifida*, b. J. 2f. sm e, hir: 1 3-cleft, bipnt: di li: seeds pt.
- VERBES'I'NA. 17—2. 55. Altered from *verbena*.
- 1 *siegesbeckia*, y. Ju. 2f. st wi: 1 op, ln-o, ac both ends, sr. 3 to 6 f.
 2 *virginica*, w. Ju. 2f. st nr-wi: 1 al, br-ln, sub-sr: cmb-com: c ol. 3-6 f.
 3 *sinuata*, w. Oct. 2f. 1 al, ss, sin, at base: f cmb: c im. 4 to 6 f. S.
- VERNON'IA. 17—1. 55. Wm. Vernon. Flat-top.
- 1 *noveboracensis*, p. Au. 2f. tall: 1 ln, sr, rough: cmb fs. 4 to 6 i.
 2 *praal'ta*, r. Au. 2f. st tall, an, thickly pu: 1 ln, a sr, pu be: cmb fs:
 scales of c o, a, awnless. 4 to 7 f.
- 3 *corymbosa*, r. st sub-sca: 1 thick-set, ss, sub-cls, ln, ac, sr below, en
 apex, sca ab, so pte be: cmb tm, fs: scales of c ov, ot, cil. 1 f.
- 4 *bald'wini*, st pu: 1 ln-o, sr, sca ab, pu be: cmb diffuse, sub-fs.
- 5 *oligophylla*, p. Ju. 2f. st si, brh ab: rad l ov; cau ln; to: cmb pn:
 scales c ln, ac. 2 f. S.
- 6 *scaber'rima*, p. Ju. 2f. 1 ln-li, a, c-ss, sca, en: cmb sub-u, few-f. 2 f.
- 7 *angustifolia*, p. Ju. 2f. st si: 1 nm, lg-li, en: cmb sub-u: scales c m. 3 f.
- 8 *tomento'sa*, p. Au. 2f. st tom ab: 1 lg, nr, ln, a sr, sca ab, tom be:
 cmb fs: scales of c fi at apex. 2 to 5 f.
- 9 *fosciculata*, Au. 2f. 1 lg-li, si: f cmb, e, apx: c ovoid, so, scales unarm.
- 10 *altis'sima*, O. p. Au. 2f. st g: 1 ln, sr, sm sca: c sml, hem; scales o cil.
- VERONI'CA. 2—1. 37. Gr. *eikōn*, a figure, or St. Veronica. Speed-
 weel, betony, brook-lyme.
- 1 *officinalis*, b. M. 2f. sk lt, pd: 1 op, ob, h: st prt, h. 9—12 i.
 2 *serpyllifolia*, O. b. M. 2f. r tm, sub-sk: 1 o, g, cre: cps lg styles. 2-6 i.
 3 *alpi'na*, cmb tm: 1 op, ln ol, a, to; c his.
- 4 *anagallis*, b. J. 2f. r op, lg, loose: 1 ln, sr: st e. 12 to 18 i.
 5 *beccabun'ga*, b. J. 2f. r op: 1 ov, ot, sub-sr, g: st prt, ro at base. 9-18 i.
 6 *scutella'ta*, O. b. J. 2f. r lt, al; pe div: 1 ln-li, sm to. 9—12 i.
- 7 *arven'sis*, O. w-b. M. ☼. f sl, ss: lower 1 hr-o, sr, pe; f 1 ln, ss, lg pd:
 di of c uneq. 3 to 8 i.
- 8 *agres'tis*, b. M. ☼. f sl, 1 hr-o, sr, pe: st prt, pu: seg of c o. 5 to 10 i.
- 9 *peregr'i'na*, O. W. M. ☼. f ss, sl: 1 g, ln-li, to en, ot, lower op. 4—8 i

- 10 *hederifolia*, w-b. M. ☼. f sl: 1 eq pe, rd-cor, 5-lo; up 3-lo; seg c cor.
 11 *reniformis*, b. J. 2f. sk pd; lt, ax, 1-bt: 1 op, lg-pe, hr-ren, gh-cre. S.
 VESICARIA. 14--1. 63. Lat. *vesica*, bladder.
 1 *didymocarpa*, d: rad 1 br-o-spt; rest ln, sub-en: c eq; silicles lr. inf pa.
 VEXILLA'RIA. 16--10. 93. Lat *vexillum*, a banner. Butterfly weed.
 1 *virginiana*, b. Ju. 2f, 1 ter, o: c 5-par, lg bt; di sb; le sub-fal, cli.
 2 *mariana*, w-b. Ju. 2f. 1 ter: c 1r ln-li bt, 5-cleft: seeds glutinous. 2 f.
 3 *plumiera*, 1 ter, o-ol, ac: c bl, sh o bt. co lr; st cli. S.
 VIBUR'NUM. 5--3. 58. Lat. *viburnum*, pliant. Sheep-berry, Snow-ball.
 1 *prunifolium*, w. J. ½. 1 rd-ob, ov, a sr, g: pe mr. 8 to 15 i.
 2 *pyrifolium*, w. M. ½. g: 1 o, a, sub-sr; pe na: fru ol-o. 5--10 f.
 3 *lentago*, O. w. J. ½. g: 1 br-o, ac, sr: pe mr, cyme ss. 8--15 f.
 4 *nudum*, w. M. ½. g: 1 ov, sub-en, mr rev: pe so: cymes pd. 8--10 f.
 5 *cassidoides*, J. ½. g: 1 ln-o, a at each end, cre, sub-rev at mr: pe ke.
 6 *dentatum*, w. M. ½. so: 1 rd and o. a, to-sr, g both sides. 4--12 f.
 7 *pubescens*, w. J. ½. pu: 1 rd-o, ac, to-sr, fur-plaited, v be: sti 2. 6 f.
 8 *lantanoïdes*, w. M. ½. 1 br, rd-cor, ac, uneq sr; pe and n d. 4 to 8 f.
 9 *acerrifolium*, O. w. J. ½. 1 hr-o, 3-lo, ac, sr, pu be, cyme lg pd. 4 to 6 f.
 10 *oxycoccus*, r-w. J. ½. 1 3-lo, 3-n: 1 lo lg-ac, with sc teeth. 5 to 8 f.
 11 *edule*, w. Ju. ½. 1 3-lo, ot at base, 3-n: lo sh, to sr, ac sr: pe gld.
 12 *op'ulus*, w. J. ½. 1 3-lo, to: pe gld, so: fin compact cymes. E.
 13 *linus*, r-w. ½. 1 o, en, with tufts of h in ax of ve be: fin so cymes.
 14 *obovatum*, M. ½. g: 1 ob, cre-dt or en, ot cymesss: fru rd o. 6 f. S.
 15 *laxigatum*, w. J. ½. 1 ln, so, rt sr, en at base: brh 2-edged.
 16 *nitidum*, ½. g: 1 ln-li, shining on upper surface, os sr or en: brh 4-an.
 17 *molle*, J. 2f. 1 rd-cor, fur-plaited, to, pu be: pe sub-gld: cymes rays.
 VI'CIA. 16--10. 93. Lat. *vincio*, to bind. Tare, bean, vetch.
 1 *sati'va*, O. b-p. Ju. ☼. f in pa, sub-ss: sti to, marked dots: 1 ol-o.
 2 *americana*, p. M. 2f. sub-pu: pd my-f, sh l: sti to: 1 nm, ln-ov, ot, m.
 3 *cracca*, b. S. 2f. sk my-f, im backwards,, lr l: stili-sb, en; 1 nm, ln-ol.
 4 *caroliniana*, w. M. 2f. pd my-f; f distant: sti ln-o, en: 1 8 to 10, ln-ov.
 5 *tridentata*, b. sr sub-pu. 1 nm, nr-ol, en, ot, sh-m, pilōse ab, pilose be.
 6 *faba*, w. b. J. ☼. st my-f, e, strong: le as, cr: 1 ov, a, en. E.
 7 *sylvatica*, p. pd my-f, lg l: 1 ov: sti lunulate, se to. S.
 8 *acutifolia*, w. Ap. 2f? pd few-f, lg l: sti ln, en: 1 li, a each end: st g.
 VILLAR'SIA. 5--1. 46. Wm. Villars. Floating hearts.
 1 *lacunosa*, w. Ju. 2f. 1 hr-ren, sub-pel, floating: pe bearing f. co g.
 2 *cordata*, Ju. 2f. 1 cor, en: pe bearing f. S.
 VIN'CA. 5--1. 47. Lat. *vincio*, to bind. Periwinkle.
 1 *minor*, b. Ap. ½. st pc: 1 ln-ov, so at edges. f pd: teeth of c ln. E.
 2 *major*, b. M.--S. ½ st e: 1 o cil, f stalked: teeth of c se el. 6 f.
 VIOLA. 5--1. 80. Lat. *viola*, Gr. *iron*., violet. Violet, pansy, heart-ease 30.

(No stem. Corol blue or violet. Leaves undivided.)

- 1 *cucullata*, O. p. M. 2f. g: 1 cor, sub-ac: pd lg l.
 2 *affinis*, O. b. p. M. 2f. g: 1 cor, sub-ac: pd sh l.
 3 *congener*, p. Ap. 2f. h: 1 cor, dc into pe: pd sh l: di c en behind: pd sm 4-sided.
 4 *asarifolia*, p. M. 2f. h: 1 lr, o-ren, dc into pe: pd sh.
 5 *sororia*, b. p. M. 2f. 1 h ab, g be, rd-o, pe sh with sml sti: pd lg of l.
 6 *emarginata*, b. p. M. 2f. g: 1 o, up gh-to at base, n lr: pd lg l: pt em d.

- 7 *sagittata*, b. p. Ap. 2f. g: l cil, hr-ar, gh base, pd lg l: spur el.
 8 *ovata*, p. Ap. 2f. h: l cil, sub-cor, dc into pe: di of c em: spur br.
 9 *odorata*, b. M. 2f. shoots crp: l cor: c ot. E.
 10 *villosa*, p. b. M. 2f. h: l rd-o, ot, ve cl, pd lg l, become g after f. S.
 (No stem. Corol blue or violet. Leaves divided.)
 11 *palmata*, p. b. 2f. h: l hr-ren, 5-lo, sh than pd: di of c en behind.
 12 *pedata*, p. b. M. 2f. g: l di, di li 3-lo at end, sm ln.
 13 *heterophylla*, Mr. 2f. g: l pal-lo, sm cor ol: di of c sb, em behind.
 14 *septemloba*, p. Mr. 2f. g: l ped, with many o, cor, dt; lower en: di of c ln, en behind.
 (No stem. Corol not blue or violet.)
 15 *amoena*, w. Ap. 2f. g: lo and h ab, pd lg as l, spotted.
 16 *blanda*, w. Ap. 2f. g: l rd, with sc li ab; pe h: pd lg than l.
 17 *primulifolia*, w. J. 2f. sarmenting, g: lol, de into pe, be sm h: pd lg than l.
 18 *lanceolata*, w. Ap. 2f. g: l nr-ln, lg, ta to pe: pd lg as l.
 19 *rotundifolia*, O. y. M. 2f. g: l or, br-o, h at n be: spur sh.
 20 *clandestina*, J. 2f. g, sub-dc: l br-o: pd brh, with sml bt.
 (Having stems. Corol yellow or white.)
 21 *striata*, y-w. J. 2f. st oblique, brh an, l rd-o, h sm: pe lg, lr sti: pd lg than l.
 22 *pubescens*, O. y. 2f. h: st si, l br-o, pe sh with lr sti: pd sh than l.
 23 *hastata*, y. M. 2f. g: st si: l hastate and deltoid ab, others o: pd sh l.
 24 *debilis*, w. Mr. 2f. st dc, brh: l br-o: sti torn, cil.
 25 *nutalli*, y. M. 2f. g: st si: l ln-o: ta to base: sti ln-li, en.
 (Having stems. Corols not yellow or white.)
 26 *canadensis*, r. y. w. M. 2f. g: st si: l o: sti en mem, ln-o: bt sml, sb f regular: spur sh.
 27 *rostrata*, O. b. p. M. 2f. g: st my: l rd-o, with few h, sh than pe: pd lg fi: spur lg.
 28 *muhlenbergia*, b. p. M. 2f. g: st sub-prt: l sub-ren, sh than pe: sti lr, ln-o, cil: bt minute: spur extended.
 29 *tenella*, b-w. M. ☼. sub-g: ro fi: st 3-an, si: up l ln-o, un rd or spt.
 30 *tri'color*, p. y. b. M. 2f. st an, di: l ol, deeply cre: sti ly-pnt.
 31 *selkirkii*, p? l cor, cre-sr, sub-h: pu b-less: spur lg, thick, ot.
 (Unknown as to stems and color of corol.)
 32 *alleghensis*, 2f. h: lo and hr-ol, sub-en: pe mem: spur sack-like.
 33 *radicans*, 2f. sml ro run horizontally: stgmr: l ln-o, contracting abruptly at base. F minute, middle pt ob.
 VIRGIL¹LA. 10—1. 93. Latin poet Virgil.
 1 *lutea*, y. J. h. l pnt; l al, o, sh ac, g: r el, pnd: le pe, flat. S.
 VIS¹CUM. 20—4. 58. Lat. *riscum*, from the Gr. *ixos*. Mistletoe.
 1 *verticillatum*, g-w. J. h. brh op and wr: l wd-ob, 3-n: sk ax. 1—2 f.
 2 *rubrum*, h. l ln-ob, ot: sk ax, wr. S.
 3 *purpureum*, h. l ob, ot, os 3-n: sk ax: f op.
 VI¹TIS. 5—1. 72. Celtic *gwyd*, (pronounced *wyd*.) Grape.
 1 *labrusca*, w-g. J. h. l br-cor, lo an, white d be; fer r sml: ber blue.
 2 *vulpina*, O. w-g. J. h. l cor, ac, gh-to, g sides; n and ve pu: r lax.
 3 *æstivalis*, E. w-g. J. h. l br-cor, 3 to 5-lo; in young state rust-d be:
 4 *ripa'ria*, w-g. M. h. l uneq gh-to, sh 3-cleft, pu on pe, n and mr
 5 *vinifera*, J. h. l sin-lo, na or d. E.

6 *rotundifolia*, M. \bar{h} . l lucid, cor, uneq to: f of r in my sml hd: ber lr.
 7 *palmata*, \bar{h} . l cor, pal, g; di ln, gh: u r.

VITTA'RIA. 21—1. 5. Lat. *vitta*, a fillet.

1 *lineata*, \bar{z} . fr li, lg, pnd: fru dots sl, within mr: l grass-like. S.

WENDLAN'DIA. 6—6. 77. M. Wendland.

1 *populifolia*, w. J. \bar{h} . st cli; brh pu, striate: l al, pc, cor, o, m. S.

WINDSO'RIA. 3—2. 10. John Windsor. Red top.

1 *seslerioides*, Au. \bar{z} . pn spr and fl: sk all pd, 6-f, ln. 3—5 f.

2 *ambig'ua*, S. \bar{z} . pn sk, spr: sk o, thick, ss, 5—6-f: va of co m. 2 f. S.

WOOD'SIA. 21—1. 5. Joseph Woods. Flower-cup.

1 *hyperbo'rea*, Ju. \bar{z} . fr put: l 3-par, gh-pnt, wd-form, ot, to, rough-li.

2 *ilvensis*, Ju. \bar{z} . fr bipnt: di ol, ot: lower repand; up cu, rough-li be.

WOODWARD'IA. 21—1. 5. Thomas J. Woodward. Kidney-fern.

1 *angustifolia*, Au. \bar{z} . bar fr pnt: di ln, re, sr: fruit bearing fr pnt.

2 *virginica*, Ju. \bar{z} . fr g, pnt: l ss, ln, pnt: di ol, ot cre, fer el: stipe g.

3 *thelypteroides*, Ju. \bar{z} . fr pnt; wi-l ss, v at base, ln-li, pnt. 6 i. S.

XANTHIUM. 19—5. 55. Gr. *xanthos*, yellow. Clott-burr.

1 *strumarium*, Au. \odot . st unarmed, brh: l cor, lo, sr, sca, 3-n at base.

2 *oriental'le*, \odot . st unarmed: l wd o, sub-3-lo: fru in strobile.

3 *spinsum*, Ju. \odot . spi in threes: l 3-lo. L sin-lo. 1—3 f.

XANTHORHIZA. 5—13. 61. Gr. *xanthos*, yellow, and *riza*, root. Yel-
low parsley.

1 *apiifolia*, Ap. \bar{h} . st si: l 3-ter: pe cls at base: r below l, com. 1—3 f.

XEROPHYLLUM. 6—3. 13. Gr. *xeros*, dry, and *phullon*, leaf.

1 *sphodoloides*, w. J. \bar{z} . fi dilated towards base, eq co. 3—5 f.

2 *teuax*, w. J. \bar{z} . scd l: r showy, lax: bt mem: pt ov: fi exceed co. S.

3 *gramineum*, Au. \bar{z} . sep l, pn: r div; bt o, lg thar pe: pt ol. ac. 2 f.

XYLOS'TEUM. 5—1. 58. Gr. *xulon*, wood, and *ōsteon*, bone. Fly-ho-
ney-suckle- Twin-berry.

1 *ciliatum*, w-y. M. \bar{h} . ber distict: l o and sub-cor, mr cil. 3—4 f.

2 *solo'nis*, y. M. \bar{h} . ber united: 2-f on one gm: l ol-o, v. 2 f.

3 *villosum*, \bar{h} . brh v: l ol-ov, ot, sub-tom, v: pd sh: ber blue.

XY'RIS. 3—1. 13. Gr. *xuros*, pointed. Yellow-eye grass.

1 *caroliniana*, y. Au. \bar{z} . l li, grass-like: st 2-edged: hd-o-a. 9—18 i.

2 *brexifolia*, y. Au. \bar{z} . l sb, sh: c lg bt, gh-to. 12 i.

3 *fimbriata*, J. \bar{z} . hd lax-im: c lg bt, fimbriate: l lg, ensi. 2 f. S.

4 *juncea*, M. \bar{z} . l t, a: sep t, she at base: bt rd: hd ov. 6—12 i.

5 *indica*, y. J. \bar{z} . l lg, grass-like, tortuous: sep tortuous: hd glo.

YUC'CA. 6—1. 14. Yuca, an Indian name.

1 *filamentosa*, w. Au. \bar{z} . st-less: l br-ln, en, fi on mr. 2—5 f. S.

2 *angustifolia*, w. Ju. \bar{z} . st-less: l lg-li, gl, m, sm fi on mr: cps lr.

3 *recurvifolia*, p-w. Ju. \bar{h} . l ln-li, re-def, fi on mr: inner pt br. 3 f.

4 *gloriosa*, w. Au. \bar{h} . brh: l ln, plaited, en: pt ln. 2—4 f.

5 *alnifolia*, w. Au. \bar{h} . brh: l ln-li, with callous cre, rigid. 10—12 f.

ZA'MIA. 20—. 100. Gr. *zemia*, loss.

1 *integrifolia*, \bar{h} . fr pnt; l ln, rd-ot, attenuate at base, sr on outside. S.

ZANICHEL'LIA. 19—1. 7. J. J. Zanichelli. False pond-weed.

1 *intermedia*, anther 2-celled: stg dt-cre: seed so: en on back.

2 *palustris*, Ju. \odot . anthers 1-celled: stg en: seed to on baek.

ZANTHOXYLUM. 20—5. 94. Gr. *xanthos*, yellow, and *zulon*, wood.

Prickly ash. Tooth-ache bush.

1 *fraxineum*, O. g-w. M. \bar{h} . pk l pnt; l ln-ov, sub-en, ss. 8—12 f.

- 2 *tricarpum*, J. 5. 1 pnt, g; 1 pe, ln-falcate, cre-sr: pe unarmed: f co.
 ZAPA'NIA. 13—2. 40. Paul Anthony Zappa. Frog fruit.
- 1 *nodiflora*, w. Ju. 2f. 1 wd-ob, sr ab: sk hd-conic, sl, lg-pd: st crp.
- 2 *lanceolata*, w. Ju. 2f. 1 ln-li, sr: sk hd-conic, sl, lg-pd: st crp.
- 3 *cuncifolia*, st her, pc? sm sca: 1 nr-wd-form, thick, g, to tow apex.
 ZE'A. 19—3. 10. Gr. *zea*, from *zaō*, to live. Indian corn.
- 1 *mays*, y-g. Ju. 2f. 1 ln-li, en, ke. V. *precox*, st low: seeds 8-row. S.
 ZIGADE'NUS. 5—3. 13. Gr. *zugos*, a yoke, and *aden*, gland.
- 1 *glaberrimus*, w. J. 2f. scp l: bt o, ac: pt ac: 1 lg, re. 2—4 f.
- 2 *elegans*, w. J. 2f. scp na: bt li: pt o, a. S.
- ZIN'NIA. 17—2. 55. M. Zinn. Blood Marigold.
- 1 *violacea*, r. Ju. 1 o-a, ss, sub-cre: apex of chaff or scales fim-sr. E.
- 2 *multiflora*, r. S. 2f. 1 op, ln-o, sub-pe, f pd. S.
- ZIZA'NIA. 19—6. 10. Gr. *zizanion*, darnel. Wild rice.
- 1 *aquatica*, Au. 2f. pn py, s f below, spr; p f ab, sk: pe elavate. 4—8 f.
- 2 *miliacca*, Au. pn effuse, py: glu sh-awned: s and p f int: seed o. 6 f.
- ZI'ZIA. 5—2. 60. Gr. *zizanion*, a troublesome weed. Meadow pars-nip, alexanders.
- 1 *aurca*, O. y. J. 2f. 1 biter: 1 ln-ov: u with sh pd: 1 q. 1—2 f.
- 2 *integerrima*, O. y. J. 2f. g: 1 sub-gl, lower 3-ter, up twice. 12-18 i.
- 3 *cordata*, O. y. J. 2f. rad 1 rd cor, cre: cau pe, ter; up 3-par: u sh pe.
 ZI'ZYPHUS. 3—1. 95. Lat. *zizipha*, a kind of plum. Supple jack.
- 1 *volubilis*, g-y. J. 5. unarmed: 1 o, ribbed, en, sub-undulate. S.
- ZOR'NIA. 16—10. 93. John Zorn.
- 1 *tetraphylla*, y. Jn. 2f. 1 digitate; 1 4, ln, g: sk ax, pd: f al. 2 f. S.
- ZOSTE'RA. 19—1. 7. Gr. *zoster*, a girdle. Eel-grass.
- 1 *marina*, Au. 2f. 1 en, sm 8-n: st t. L'g: f minute.

ABBREVIATIONS AND EXPLANATIONS.

Time of Flowering.

Mr. March—Ap. April—M. May—J. June—Ju. July—Au. August—S. September—Oc. October.

Duration of Plants.

☼ annual—♂ biennial—2f perennial—♂ woody.

Color of Corols.

r. red—p. purple—y. yellow—w. white—b. blue—g. green.

Height of Plants.

i. used at the end of specific descriptions, after a figure, signifies inches; as *Stachys hyssopifolia*. The 12—15 i. at the the end of the description, means 12 to 15 inches high. But 4-f, not at the end, means 4-flowered. f. used in the same manner, signifies feet; as *Spiraea betulifolia*. The 1 f at the end, means that the stem is one foot long.

Localities

E. at the end of a generic or specific description, means that the genus or species is *exotic*; and that all following species, unto the end, or unto one with S. at the end, are *exotic*.

S. at the end of a generic or specific description, means that the whole genus, or the species to the end, are found exclusively South of a straight line from the mouth of the Delaware, to the south end of Lake Michigan.

Artificial and Natural Classification.

Three numbers following a generic name, mean, artificial class, artificial order, and natural order of Jussieu; as *Papaver*. 12—1. 62. means, that this genus (poppy,) is class 12, (polyandria,) order 1, (monogynia,) natural order 62, (*Papaveraceae*.) On turning to the natural orders, it will be seen at the foot of the page, that this order has been subdivided into *Nymphaeaceae*, *Nelumboneae*, *Podophyllaceae*, and *Saraceneae*, by Lindley and others. And against *Papaveraceae*, it will be seen, that its properties are, *Narcotic and Anodine*.

English Names.

English names are set at the end of specific descriptions, in some cases; in others, against the generic names, with or without references to particular species by number: as they happen to be the general names of the genus, (as strawberry, under *Fragaria*,) or the particular names of species, (as sorrel the 9th under *Rumex*.)

NATURAL METHOD;

INCLUDING VEGETABLE PHYSIOLOGY.

SEEDS.

PLANTS are distributed into three grand divisions, by the structure of the seeds. Farther subdivisions are often described by references to the seeds; and as they contain the rudiments of future plants, they are important in the study of vegetable physiology. For these reasons, as well as on account of the proximate chemical principles of vegetables, seeds should be attentively studied at this stage of a course of instruction.

In studying seeds, we examine attentively their *cotyledons*, (being their thick lobe-like parts, as the two halves of a pea, or the chief mass of a kernel of Indian corn) their *corcles*, (the rudiments of future plants;) their *teguments*, or *testa*, (the outer skin or bark;) *hilum* or eye, (the scar or spot by which the seed was attached at the time it was growing.) The hilum is at the *base* of the seed. Seeds of all Cryptogamous plants are destitute of *cotyledons*. Neither the *corcle*, tegument, nor hilum, are perfectly distinct; and it is even doubtful, whether we find *analogous* parts in any of them.

We presume the existence of a part *equivalent* to the corcle; because the laminæ of mushrooms grow under the culture of the gardener. Blight in grain, and numerous other fungi, as well as mosses, ferns, &c., produce something equivalent to the power of seeds, as appears from their origin and growth. These equivalent masses are called *Sporules*, from Greek *spora*, offspring, because they origin to a new individual whether on the place of seeds or buds. Being always destitute of cotyledons, plants bearing such seeds or sporules are called Acotyledonous, from Greek, *a*, without *kotulodon*, cup or head of the hip joint. Plants bearing seeds, which have cotyledons, are called *Cotyledonous*.

EXERCISES IN THE STUDY OF SPORULES AND SEEDS.

ACOTYLEDONOUS SEEDS.

Make a small blank book, with leaves of white, blue, and red. Prepare a vial of a thin solution of perfectly limpid gum arabic. Smear a small spot on the white paper; and strew upon it the black dusty seeds of a puff-ball, very thinly. Subject these seeds to a good microscope in a strong light.

In the same manner attach the seeds of numerous other cryptogamous plants; as of mosses, ferns, &c. Let each kind be strewed upon paper of the color differing the most from the color of the seed. This collection may be preserved for the purpose of reviewing them at any

future time. The examination of the seeds, or sporules, of Lichenes is the most interesting and important. Collect some of the largest receptacles (cups) from various colored species of lichens. Cut them with a very sharp knife, both vertically and horizontally. Attach them to the paper as before directed. Some may be attached to it in the position in which they stand naturally on the frond. These will form exceedingly interesting subjects for the microscope.

The sporules of cryptogamous plants are scarcely ever to be improved, for the purpose of examination by putting them in a situation to germinate.

COTYLEDONOUS SEEDS.

The examination of seeds, which have either one or two cotyledons, is one of the most important exercises in the study of vegetable physiology.* But no satisfactory progress can be made in this study, without the aid of seeds in all stages of germination, from the first swelling of the seed to the development of the blade, or first leaving. The following is, probably, the best method for preparing seeds. Collect a pint or quart of clean loam, which contains no manure nor any other mixture. Spread this upon a plate about an inch and a half in thickness, after being finely pulverized. Check the surface into squares, and number the squares by a minute paper label. Plant seeds in squares No. 1 the first day, No. 2 the second day, and so on through a week, or even a fortnight. Sprinkle the loam daily with water, and set the plate in a moderately warm place. When the seeds are to be used for instruction, let one of each number be taken out and carefully washed. This will enable the student to compare the seeds in all stages of germination. Some seeds may be prepared by laying them on a plate, covering them with a wet cloth, and sprinkling them daily. A few seeds should be put into warm or hot ley-water, for the purpose of taking off the tegument (or hull) so as to leave the cuticle beneath entire. All seeds have this outer tegument, (testa or primines,) excepting the *coniferae*, as pine trees, &c., and the *Cycadeae*, as sago-plant. It will be most advisable to examine the two grand divisions of Cotyledonous Seeds separately. They are *Monocotyledonous*, having one cotyledon to the seed; and *Dicotyledonous*, having two cotyledons to the seed. The grand divisions should be numbered from

MONOCOTYLEDONOUS SEEDS.

Indian corn. (Zea.) This seed is always at hand and is very large, and well adapted to the exercise of the student. In truth the teacher will make the best possible advancement with a class, by examining this seed thoroughly.

First exhibit the *farinaceous* character of the *albumen*, by pounding Indian corn in a mortar; or by shewing common Indian meal. Next shew the outer tegument (primina) separated by ley. Thirdly, point out the whole mass of the embryo, when it first begins to sprout. It will

* It is remarkable that no directions for this exercise has hitherto been published in English, French, German, or Latin.

then be lens-form, and lie on one side of the base of the kernel. After sprouting a little, the lobe (the chief mass of the kernel) will begin to shew, that it is becoming (changing into) the cotyledonous leaves. The upper part of the corcle, which seems to run into the cotyledon, begins to become the stem; and the lower part of the corcle, begins to extend downwards to form the root. The student should carefully examine the Indian corn in all stages of its germination and growth, until the blade is fully formed and grown to the height of three or four inches.

Wheat, Rye, Oats, &c. These seeds all present the elementary characteristics of the Indian corn. But a close inspection of the undescribed differences and analogies, and even the comparison of equivalent powers, will be of great importance to the student, in aid of his further investigations.

Carex. Procure the largest seeds of some species of the sedge grass. Proceed in all respects as with Indian corn. The seed is a kind of nut, crustaceous and bony. The carex, as well as all other genera of the order Gramineae, by having the plumula (ascending part) scarcely visible, and the whole corcle enclosed in the albumen. No part of the corcle can be fairly examined until it begins to sprout.

Lily, Tulip, or Onion. Tegument or hull spongy. Embryo straight, and enclosed in the axis of the fleshy albumen; with the radicle next to the hilum.

These seeds are proposed, because they are always in the seedsmen's shops, and may be procured and examined at any season of the year. Other seeds may be procured, according to the Natural Orders referred to under the alphabetical arrangement:

DICOTYLEDONOUS SEEDS.

Pea, (pisum.) Tegument very distinct and thick; and is easily separable after boiling in fresh water. After taking off the tegument, the two cotyledons appear distinct; and the corcle between them is perfectly manifest. Embryo is destitute of albumen, and the radicle is bent back upon the cotyledons—cotyledons remain under ground.

Bean, Clover, Vetch, &c., may be examined in the same manner.

Carrot, Dill, or Coriander. Seeds in pairs, joined by commissures; embryo minute, at the base of the horny albumen; with the radicle pointing to the hilum.

Sage, Savory, &c. Seeds erect and almost destitute of albumen, with an erect embryo and flat cotyledons.

Lettuce, Sunflower, Dandelion, &c. Seed erect, embryo without albumen, tapering, with the radicle inferior.

Poppy, Celandine, Bloodroot. Cotyledons plano-convex; embryo minute, straight at the base of the fleshy oily albumen.

Radish, Mustard, Shepherd-purse, &c. Seed without albumen; embryo with the radicle folded upon the cotyledons.

Orange, Lemon. Seed with thick fleshy cotyledons, without albumen; embryo straight, with a conspicuous plumula, (ascending part.)

Grape. Seed bony, erect, with hard albumen; embryo erect, about half as long as the albumen, with a tapering radicle.

Hollyhock, Cotton, Mallows, &c. Seed without albumen, sometimes hairy; embryo curved, with double and twisted cotyledons.

Flax. Cotyledons flat; no albumen, or rarely; embryo straight, fleshy; embryo pointing towards the hilum.

Buckwheat, Dock, Rhubarb. Nut generally triangular; albumen farinaceous, or none; embryo inverted, generally on one side; plumula inconspicuous; radicle at the end opposite to the hilum.

Pumpkin, Squash, Cucumber. Seeds flat, ovate, arilled; embryo flat, no albumen: cotyledons foliaceous, veined; radicle next the hilum.

Hemp, Hop, Nettle. Seed with or without albumen; cotyledons face to face; embryo straight, curved, or spiral, with the radicle remote from the hilum, being on the upper part of the seed.

Apple, Pear, Quince, Thorn, Shad-flower. The inner capsules (endocarps) cartilaginous (as around apple-seeds) or bony, sometimes spongy; seeds ascending, without albumen, cotyledons flat, embryo erect, with a short conical radicle.

Peach, Plum, Cherry. (These following seeds or nuts must generally have a month for germinating.) Seed is the putamen and its contents, within the sarcocarp (fleshy part) of a drupe. (It is generally called the stone and meat of stone-fruit.) Embryo straight, with the radicle pointing to hilum; cotyledons thick without albumen.

Walnut, Butternut. Seeds 4-lobed; embryo of the same form without albumen, radicle superior, cotyledons fleshy, wrinkled, 2-lobed.

Oak, Chesnut, Hazlenut. Seed inclosed in a leathery or bony nut; embryo large with a superior minute radicle, and fleshy plano-convex cotyledons.

Pine, Cedar, Juniper. Seed hard-crustaceous, destitute of a proper tegument; (cone-bearing and cycadeous are the only plants, whose seeds are destitute of the tegument;) embryo in the midst of fleshy oily albumen; cotyledons opposite (in some cases polycotyledonous,) radicle next to the apex of the seed, and nearly connected with the albumen.

After a student has carefully examined a considerable part of the seeds named in this article, the organization of vegetable substance should next claim the attention.

STRUCTURE OF VEGETABLES.

All parts of vegetables consist of spherical or spheroidal vesicles or bubbles, more or less compressed into polyhedral or sub-polyhedral forms.

These vesicles adhere surface to surface, and thus make up all vegetable masses, fibres, laminae, &c. Strong woody fibres consist of vesicles of greatly elongated spheroides, compressed into hollow parallel-pipes; which lie in contact with each other like bricks in a wall. Loose parenchymous, pulpy or succulent parts of vegetables consist of spherical vesicles, adhering by compressed sides, which become plain faces. To illustrate the vesicles or bubbles, as they actually exist when they make up the pulpy or parenchymous masses of vegetables, proved thus: Make strong soap-suds in a glass quart decanter, covering the bottom to the depth of two inches. Insert a clean tobaccopipe, or other tube, to the bottom of the decanter; then blow into it until the decanter is filled with soap-bubbles. By pressing in the breath, the bubbles will become compressed into polyhedra, more or less perfect; in all respects resembling to appearance, the cellules of pulpy vegetables. If exceedingly thin

slices are cut, both vertically and horizontally, from succulent plants, (as the stem of pond-lily, blood-root, &c.,) and laid upon thin clear window glass, the pores will exhibit the precise appearance of the soap-bubbles, under a good magnifier, if the sun's rays are reflected upwards from below the glass. Though all vegetable matter consists of cellules or bubbles that appear to be independent hollow spheres, they adhere together very firmly in many plants. This union of cellules is called CELLULAR, tissue woody fibre, *spiral* vessels, or *ducts*. Their adjoining sides do not become a single wall; but they may sometimes be separated, and each remaining entire. This may be illustrated by blowing up several tough soap-bubbles with a tobacco-pipe, and throwing them into a heap upon a piece of baize. On blowing them assunder, their compressed sides will again recover their convexity; and the apparent single wall at their place of meeting, will divide and become as distinct as before contact. Though no magnifying power has shown any perforations in these hollow spheres, it appears that fluids (as sap, &c.,) are transmitted from cell to cell, throughout the whole vegetable mass. They are therefore in some way permeable to fluids.

It has been remarked, that as all vegetable bodies as well as animal, are composed of hollow spherules; it is *literally* true that *life is a bubble*. That whenever the living principle acts upon matter, it forces into bubble-form bodies; then binds them up in the various forms, suited to the residence of such living principle: when it loses its hold, the bubbles burst, and return to their natural unorganized state.

STRUCTURE OF ACOTYLEDONOUS VEGETABLES.

The cellular tissue (that is when the vesicles adhere together in a pulpy mass,) is the only structure produced by cohering of bubble-form cellules, which is universal. This structure only, constitutes every part, and every organ, of all Acotyledonous (cryptogamous) plants. All other plants have spiral vessels. As cellular tissue only, constitutes all cryptogamous plants, (that is those destitute of spiral vessels and of visible stamens and pistils) they are called cellulares. Examples. Fungi: touchwood, puff-ball, mould, grain rust, sponk, smut, ergot. Algae: frog-spittle, green-hair, frog-seed, knotty-seaweed, paper-seaweed. Lichens: negro-hair, coral-lichen, iceland-lichen, horn-lichen, (gyrophorae,) leprous-lichen, fibrous lichen. Hepaticae: liverwort, thick-leaf moss, floating liverwort, fork-stems. Musci: marsh-moss, tree-moss, hair-moss, peat-moss. Filices: ferns, rushes, ground-pines, pepper-worts. Naiades: feather-beds, (chara.)

APHYLLANTHES. LEAFLESS FLOWERLESS PLANTS.

Fungi, Algae, and Lichenes.

FUNGI. Are fungi organized vegetables, propagated by seeds in a manner analogous to the propagation of such vegetables as the grasses, lilies, cucumbers and oaks? Some believe them to be mere exudations, or the morbid secretions of disease, decaying (as they are never found on healthy growing plants) or decayed, organic substances; and that they are analogous to the gum of the cherry-tree, the nut-gall of a species of oak, the green succulent gall of the wild honey-suckle, (azalea,) the wart on the

human skin, the fungous flesh of an inflamed ulcer, or the goitre on the neck. If the eatable mushroom is produced in nearly the same form and quantity, by strewing upon mulched garden mould the pulverized laminae of mushrooms; so are warts produced on the human skin, by sprinkling upon the skin the blood and other exudations of other matured warts.

The perpetual additions of genera and species of fungi, on small plats of ground, which had been previously cultivated for ages, seem to prove that fungi are not *always* reproduced like other vegetables. The seeds might be wafted to such patches of earth by winds, if they produced known species. But when numerous new genera and species are thus produced, never before known to botanists, the case is different.

The rapid growth of some fungi resembles the shooting forth of inorganic bodies. Fungus-form ice shoots several inches in one or two hours, from near the basis of *Cistus canadensis*. Corol-form fibres of common salt often shoot several inches in one night from the bottom of cellars, which have been used for storing salt many years before. So fungi issues from stable manure three and four inches in two or three hours, and wither in a moment after the sun shines on them. I shall not attempt to decide the question, nor will I express an opinion. I will state facts to show, that, as the genera and species of this family exceed all others in the increase of numbers, the cause ought to be shown; or many will doubt their being regular organized bodies. Linnæus gave but three genera of fungi, which had the pileus, and but about half a dozen other genera. His translator, Justen, about thirty years after his death, and after adding all the discoveries of Bulliard, Bolton, Shaeffer, Sowerby, Tode, and others, made 43 genera. Eaton has selected from Fries (a Swedish cryptogamist) 110 genera, and 388 species, as belonging to North America. Lindley says, between four and five thousand species of fungi are now described; but he insinuates that many may be fortuitous productions, or even diseases, or sloughings, of other bodies. Fries discovered two thousand species of fungi within the square of a quarter of a mile. From all these facts it appears, that species are exceedingly variable, and that the varieties are too fugitive for even an enumeration, or that they are truly exudations from morbid substances.

Fungi never grow in water; which is a good characteristic distinction from Algae. The whole mass of a fungus seems to be reproductive matter in most cases; whereas the other cryptogamous families seem to have their particular fructification or reproductive spores, (seeds). In many respects fungi resemble animal matter. Prof. Eaton has shown that the *Boletus ignarius* heals when parts are amputated, by first intention like animal matter*. Fungi are generally poisonous, cathartic or emetic. But it is found that a large quantity of salt and vinegar serves as an antidote in most cases. The *Agaricus campestris* (common mushroom,) and some other species may be eaten with impunity, without thus seasoning them. Some species of Agaric, of the section *Amanita*, are said to be actively intoxicating. Those called blite, smut, ergot, dry-rots in timber, mildew, and mould, are often injurious to the labors of man. By careful observation, their ill effects may probably be placed under human controul. It has already been discovered, that the essential oil of either peppermint, anise, turpen-

tine, tansy, mint, &c., merely by their perfume, will prevent the growth of mould on books, leather, cloth, &c. As many species of cimex (bug) are destroyed, or driven from rooms, with the same perfume, this relationship deserves inquiry. Fungi have not been found as fossils in transition, or secondary rocks. This is no evidence against their early creation; for their texture is so loose, porous and transitory, that they could not endure a sufficient time for the petrificative process. A few fossil fungi have been found in the Tertiary class. There is said to be a very perfect specimen in the Troy Lyceum of Natural History, found in the Tertiary of Alabama. It is a *Racodium xylostroma*, (oak-leather, tinder, punk,) enclosed in the block of a fossil tree. Fungi are so similar in regions of similar temperature in all countries, that a complete system prepared for any degree of temperature on one continent, will serve for any place on the other continent, where the temperature is about equal, excepting those which grow on other plants. And parasitic fungi are nearly the same also, if the decaying vegetable or animal matter upon which they grow in one country, are found in the other.

ALGAE. It is the opinion of Lindley, (from whom this article is mostly taken,) that algae or sea-weeds, frog-spittle, &c., differ essentially from fungi on one side, and lichens on the other, by nothing but growing in water. In their elementary state, when they commence their growth, they appear as if a green mucous, or albuminous slime, had been spread with a brush upon rocks in the sea, or stones continually moistened by water, or hard damp ground, &c. This seems to be the origin of the two existences—animal and vegetable. It may be called a provisional creation, waiting to be organized. The forms they assume in the progress of organization, are astonishing. At first simple solitary minute spherical bodies appear among green amorphous mucus, such as we see spread over old buckets, on old rails, &c. which are near bottoms of fences in damp shady places. These spherical bodies when in water, become agglomerated into masses resembling fish-spawn. They are mostly green in all forms; but they are sometimes milky or reddish and filled with animalculae of the family *Naviculariae*, *Lunulirae*, and *Stylariae*. Algae are developed into tubes very frequently; when they belong to the family of *Conferva* (green hair.) These are common in fresh water as well as salt. They contain pulverulent matter inside generally. One species, *Conferva exicetorum*, often covers the ground in little hollows in woods, which are alternately inundated and empty, but always damp and shaded. Many algae seem to become well characterized animalculae, and others are exceedingly difficult to determine. Agardh says, that some shoot into vegetable crystals, like the sugar crystals of confectionaries. It is difficult to determine the reproductive parts. It seems to be contained in joints of filaments; and those sporules are naked. In germination they extend in two opposite directions, but present nothing equivalent to the pumula, and radicle of phænogamous plants. They differ much in size. Some cannot be seen without a powerful microscope, and inhabit shady damp places. Others are of gigantic size, and form immense submarine forests. Some in the North sea of the cylindrical kind, are said to be 30 or 40 feet

* See Silliman's Journal, vol. p. . This article is copied into Edinburgh Philosophical Journal, 14, 369, without giving credit.

in length, and five inches in diameter. Some are said to be 1500 feet in length, with long narrow leaves, and a stem but half an inch in diameter. These are sustained by bladders at the bases of the leaves. The seaweed, called *Ulva*, is seen along our shores in vastly expanded green sheets—often scarcely the thickness of paper, though much broader than common sheets.

Algae are exceedingly useful as manure. Some are used as pickles; others are stewed for the table, particularly the common *Ulva latissima*. A kind of glue is manufactured from some; and all the marine kinds make soda, (commonly called kelp or barilla.) In medicine some marine species are employed as vermifuges. The broad frond of the *Ulva* has long been used as an external plaster, (frequently to be changed,) as a remedy for the goiter. Patients are required, at the same time to use it as food. But its efficacy is now supposed to depend on the Iodine which it contains. Algae are not found in the fossil state in transition or secondary rocks. Their tender herbage and fugitive nature, would seem to be a conclusive argument in favor of this statement. Prof. Eaton says, that he has often observed impressions in the natural cleavages of rocks, which seem to indicate the presence of a vegetable resembling the *Ulva*, before the rock became consolidated. At least he supposes, that the plants, whose impressions he refers to, must have been less than half an inch in thickness, and several feet in breadth. There may have been something of the Cane or Reed family, or of the *Lepidodendron* association, flattened, as we observe, in some of the latter family. Ancient tendencies, he believes, may *occasionally* appear, centuries after *general* tendencies have ceased. This he believes is observable in the varieties of Man; which is fairly deduced from a consideration of the straight hair and thin lips of Egyptian Mummies, compared with the thick lips and curled hair of the ancient Ethiopian.

LICHENES. Lichens are distinguished from Algae by always requiring *light* for promoting their growth, and never growing under water. They never grow in caves, mines, or other dark places; and they are much influenced, by diminution or increase of aqueous vapor. For even if they happen to grow in damp, or wet places, they never perfect their seed-bearing (fructification) in such places.

Lichens consist of a medullary part or pith, which is the inside layer throughout the whole frond, and is imperfectly cellular or filamentous. It is covered with a cortical or bark-like layer; through which, portions of the medullary part bursts, and becomes shields, (apothesia,) or receptacles, containing nuclei of floccose, gelatinous matter, among which lie cases of seeds or sporules. These cases may be examined with a microscope, and will appear in the form of transparent, or semi-transparent membranous tubes. Sometimes they are single, and sometimes several are placed end to end.

Some naturalists assure us that all lichens commence their existence, as *Conserva* (Algae,) in places temporarily wet. That as soon as their places of growth become dry, the under parts die, and the upper parts become lichens.

Lichens consisting of a kind of dust, called pulverulent lichens, first clothes the bare rocks of islands recently emerged from the sea—then follow the leaf-like kinds—then mosses—the hepaticae, &c.

Vast numbers appear like white spots, also yellow, brown, &c., on growing trees more or less circular; also in spots on stones, rocks, old rails, &c. Some grow on the ground, with branches resembling coral. Some are fibrous, often suspended from branches of trees, several yards in length. Fries says, that 2,400 species of lichens are known. Acharies describes but 800. The coral-like kinds, as *Baeomyces* and *Cenomyce*, are found in the fossil state in tertiary deposits; particularly in antediluvial tufa and shell-marle. There is a remarkable locality on the bank of the Erie Canal, eleven miles west of the great salt-works. I have not been informed of any fossil lichens in transition or secondary rocks. Some species are very useful in dying; others are moderately tonic. It is said that the *Variolaria*, which is most common on birch trees, contains a large proportion of oxalic acid. Iceland lichen (*Cetaria islandica*) is highly nutritious, and mildly tonic.

FLOWERLESS PLANTS WITH GREEN HERBAGE, WITH OR WITHOUT LEAVES.

Hepaticae, Musci, Filices, and Naiades.

HEPATICAE. Plants of this family are exceedingly variable. Schwinitz calls them Hepatic mosses. By their general appearance we should be disposed to call them succulent-leaved mosses, excepting the *Riccia natans*; this we should call a floating lichen. The seed (sporules) are contained in dehiscent capsules, (thecae,) excepting the *Riccia*, which has the seed immersed in its substance. Under a microscope, an irregularly spiral filament is seen among the sporules. Most of the *Hepaticae* have a four valved capsule, which opens at length so as to exhibit a cruciform appearance. Some have the capsules under a peltate cap, as the brook liverwort; also minute green bodies in cups on the surface of the frond, which will produce new plants, as well as the sporules in the capsules. All *hepaticae* differ from mosses in the absence of a lid to the capsule. *Hepaticae* grow in damp shady places, on the earth or on trees. They cannot flourish in dry sandy places. Sprengel enumerates 237 species; 6 only of these were found in Africa, while 50 were found in the little island of Java.

They are cooling, and mostly tonic. The common brook liverwort (*Marchantia polymorpha*,) is much used in all inflammatory cases, both as a tea and as an external application. I have not been informed of any *hepaticae* being found in a fossil state.

MUSCI. The mosses have a more definite character than any of the cryptogamous families. And though they have not been applied to much use in medicine or the arts, they are the most elegant "play-things" in nature. Their seeds are enclosed in capsules (thecae,) which are open at the top, and bordered by four teeth, or some multiple of four, as 8, 16, 32, &c. A lid shuts over the opening, (operculum,) and the whole is terminated with a cap, called a calyptré. The teeth, and a few additional processes of the mouth, furnish very definite characters for arranging mosses in sections. They are easily preserved, and exhibit all their perfections in spring or autumn.

They grow on trees, earth, in water, in damp and dry places, but they generally prefer damp shady places, and a temperate climate. About 800 species are known. They are generally feeble tonics, but scarcely used. It is said that some species have been found in the fossil state in the Tertiary deposits.

FILICES. This tribe of plants approaches phenogamous plants so nearly in general habits, that most botanists describe them in connection with the phenogamous. In this treatise, descriptions will be found in their proper places in the preceding part of the work. Besides the proper ferns (filices) which have winged leaves, (pteros ferns,) we have three other wingless families called *Apteres*: two of them *Equisetaceae*, (rushes or horse-tail,) and *Lycopodiaceae*, (ground pines,) are very common. The other, *Marcileaceae*, (the quill-wort,) one species in North America, the *Isoetes lacustris*—very rare. More than half of the species of vegetable fossils, hitherto discovered, are referable to this order. One of the earliest fossils, partakes of the nature of the pine tree (pinus) and the ground pine, (lycopodium). It assumes partly the form of a tree; but the body is scaly, resembling the ground pine and cedar. It is called *Lepidodendron*; Greek *lepidos* of *lepis*, a scale, and *dendron*, a tree.

NAIADES. Naiades consist of parallel tubes, semi-transparent, greenish, often crusty. It has tubular leaves in whorls. Fruit is axillary, consisting of a nucleus made up of short tubes twisted spirally. Aquatic, not uncommon in stagnant waters. We have one genus, the *Chara*; this is considered as an obscure tribe, and not well defined. The *Chara vulgaris* gives out a nauseous odor. It is described with phenogamous plants in the preceding part of the work.

GERMINATION OF COTYLEDONOUS PLANTS.

The seed being deposited in the earth or elsewhere, for germination, it must absorb water before any other function is put in action. A portion of carbonic acid is soon evolved, in the production of which, its action seems to resemble the fermentation of the flour of seeds in the manufacture of beer, &c. A large proportion of some seeds then become sugar, and all change into sugar in a greater or less proportion. The proportion of gluten is much increased also, in some seeds. Hence wheat which has commenced germination in the harvest field, produces flour which is exceedingly glutinous, and of a sweetish taste.

Students must attend to the general structure of plants, before studying their growth.

STRUCTURE OF COTYLEDONOUS PLANTS.

Plants whose seeds are either monocotyledonous, or dicotyledonous, have *spiral vessels*, more or less, in the ascending part; but roots contain no spiral vessels. *Woody fibres* consist of long tubes, tapering at each end, aggregated by adhesion; as in the stems of grasses, flax, wood, veins of leaves, &c. All the pulpy parts, called *parenchyma*, consist of aggregated cellules in spongy masses; as the pith, the leaves, excepting the veins, the masses interposed between the fibres of wood, bark, the fleshy part of apples, plums, &c. *Tubular vessels*, which

are not made up of spiral coils, are called *ducts*. They constitute the chief volume of young thrifty stems of woody and herbaceous plants.

Examine spiral vessels thus: cut the stems of various plants crosswise. With sharp pointed tweezers attempt to pull out portions of the membrane, which surrounds the pith. Perhaps ten or twenty trials will be made before right hold of the spiral fibre will be taken. Try several transverse cuttings of several tender thrifty-growing plants. When the right hold of a well selected specimen is taken, the coil may be unrolled to a considerable length. As the tube made by the spirally coiled fibre surrounds the medula, (pith,) it is called the *medulary sheath*. This same sheath accompanies all the branches of the pith; even the pith of the veins of leaves.

Examine woody fibres thus: split a young thrifty woody shoot lengthwise, and shave off exceedingly thin longitudinal slips with a sharp knife—also cut off very thin transverse shavings. They must be quite as thin as tissue paper. Lay these upon a piece of clear glass, and examine them with a microscope. The *sides* of the fibres will be distinctly seen in the longitudinal shavings, and their *ends* in the transverse ones.

Examine the parenchyma. Subject to a suitable magnifying power (upon glass as before directed,) fine shavings of the pulp of green apples, pears, plums, grapes, cucumbers, &c., also some split portions of leaves between veins. The polyhedral cellules (or compressed bubbles,) will be perfectly manifest. This simple cellular-tissue constitutes most of the volume of many plants, both phenogamous and cryptogamous. It is often intermixed with woody fibres in large proportions.

Examine the ducts. By some authors ducts are called *air vessels*; a name founded on their supposed functions. So far as the opinion prevails that *air* is regularly transmitted through plants, the name is applicable.

Subject the longitudinal and transverse shavings of wood to the magnifier, precisely as described under the examination of the woody fibres. In the longitudinal shavings, cross-barred tubes will appear between the woody fibres, which are the ducts or air vessels. In some tender stems and roots, the fibres may be separated so as to preserve the cylindrical forms of the cylinders. In such cases appears to be semi-transparent tubes, with transverse partitions.

Remark. Students should not proceed any further, until they have carefully inspected these four kinds of vegetable texture. Drawings, however well executed, convey but very little useful knowledge on this subject.

STRUCTURE OF MONOCOTYLEDONOUS PLANTS.

After the embryo is developed into the rudimental form of the future plant, the volume of the trunk (and branches if any,) is enlarged by additional matter, introduced at the centre. In this particular, the plants of this division differ from those of the Dicotyledonous division. The trunk or stem is not divided into pith, wood, bark; neither has it medullary rays (silver-grain). The leaves are not distinctly articulated to stems and branches, separable in maturity. The leaves are nerved, very rarely with any thing resembling branching veins, and they are often sheathing. Organs of fructification mostly in threes, or a multiple of three.

Examples of this division are all the grass-like plants; as wheat, oats, broom-corn, lily-like, orchis-like, and wild turnip-like. Humbolt says, one sixth of the phenogamous plants in the torrid zone, belong to this division; one fourth in the Temperate, south of 52 deg. N. L.; one third between 52 deg. and the polar circle. Vegetable fossils of this division are found in secondary rocks, in connection with the great coal beds of Pennsylvania, and of various districts on the Eastern continent.

STRUCTURE OF DICOTYLEDONOUS PLANTS.

The trunks of these plants are tapering from the root upwards, and they consist of bark, wood, and pith. The pith is in the centre, and never increases in growth after the first year. The pith is surrounded with the *medullary sheath*, consisting of spiral-vessels, ducts, and fibres. From this sheath, rays extend all sides in some plants, called silver grains or medullary rays. The wood surrounds the medullary sheath in concentric cylinders, one for every year's growth. Bark surrounds the whole. It consists of the proper, or inner bark, the cellular integument—and last and outermost, the cuticle. Between the bark and wood a mucilage, called camb, is deposited every summer, which becomes wood and bark. By this deposit only, the volume of the trunk is enlarged after the first year.

Examine the concentric cylinders. Select thrifty sprouts of wood, of the present year, of one year, of two years, &c. Also some cylindrical billets of oak, and other wood 3 or 4 inches in diameter. Cut some of their ends obliquely with a shark knife, some transversely, &c., examine their ends with the magnifier, or with the naked eye. Observe the pith and the surrounding medullary sheath, &c. In oak, &c., of several years growth, a medullary sheath will appear around the inner surface of each woody cylinder. In such cases the older sheaths seem to become so rigid, as to be incapable of performing their destined purpose; and in cases where the inner part dies, becomes hollow: the annual renewal of this sheath is essential. If a tender growing shoot be cut off, and the lower end set immediately in water, colored with madder, or other dye wood; on splitting the shoot, after a short time, the colored liquid will be found to have ascended the medullary sheath. As these are the ascending vessels, so those towards and at the outer surface, are descending vessels. And the descending vessels become ascending ones as the state of the plant requires. Sap is always found descending towards the outside of a tree, but never ascending. This may be observed after cutting a notch into the side of a tree, as in tapping the sugar maple. Such wounds always begin to heal on the upper side.

Examine the growing process of a tree or shrub. Search out billets of wood from a wood-pile, which have scars on the surface from wounds made several years before the trees were cut down. Saw in a few inches above and below the scar, and split out a block, so as to lay bare the original wound. Concentric cylinders, called grains, will be found interposed between the bark and wound. These were all made by a transformation of the camb into wood inwardly, and into thin delicate layers of new bark outwardly. As this deposit is always made on the outside of the wood in all Dicotyledonous plants, they are called Exo-

ginous; as the Monocotyledonous plants are called Endogenous, on account of receiving their increase from within.

The leaves are distinctly articulated to the stem, and they are veined, and reticulated or net-like in the arrangement of cross-veins. The number of the divisions of the parts of flowers are most commonly 5, or some multiple of it; sometimes of 2; rarely of 3, like the monocotyledonous.

Examine the growing process of buds downwards. Collect several thrifty growing sprouts, which have buds in different stages of maturity. Peel off the bark with the bud of some, and split the stem where the bud sits on others. It will be seen that the base of the bud consists of all that was the camb at that spot, on the preceding summer. It will also be seen that all the fibres of the bark and wood, directly below the base of the bud, absolutely belong to the bud, through all its extent downwards, even into the root of the plant, as far as the very extremities of its branchlets. It will be perfectly manifest that the bud, and all its extensive fibres downwards, were produced from the maturing of the camb, or mucilage of the preceding summer. When the buds begin to be developed into leaves, branches, &c., the fibres of wood and of the bark, belonging to the bud below, are separated by camb; and the new layers are formed for the next year, as before described. It is supposed that the whole cylinder of wood is made up of the downward fibres of buds. If so, all the buds of a tree in the spring, may be considered as so many individuals, with their descending fibres (equivalent to roots) united together, forming the trunk of a tree. Hence writers have said, that the stem of a plant is produced by the successive developement of leaf-buds, upwards and downwards.

Examine the growing process of buds upwards. Collect numerous buds from various trees; some of which you believe, from former observations, would probably develop into flowers, others into leaves, twigs, branches, &c. The largest buds should be sought, on fruit trees and forest trees, in early spring. Though leaf buds and flower buds are rudimentally the same, an experienced gardener can generally separate those which are to become flowers, from those which are to become leaves and branches.

The student should be told what he is to search for, before he begins to dissect his collection of buds. He must be told, that leaf-buds and flower-buds are rudimentally the same. But that the leafy, or leafy-like rudiments, which he finds in the buds, will be developed into flower and fruit, or into leaf and branch, according to external circumstances or accidents. That what would shew itself a leaf-bud, if left to the ordinary circumstances of the tree, may be forced into flower and fruit by extra culture. Also that what would have shewn itself a flower and fruit, may degenerate into a branch and leaves by an unfavorable season, as to temperature, rains, &c. Hence the profuse flowering of apple trees in some seasons, and the profuse leafing, to the exclusion of flowers, in other seasons.

On dissecting his buds longitudinally, the student will find that all the leafy rudiments originate from very nearly the same point. If the bud proves to be of the leaf and branch kind, the scarcely perceptible distances between the places of insertion, will be stretched longitudinally, and become a branch; sustaining the leaves at different heights. That they are absolutely inserted at different heights in the bud, might

be shown by the magnifier. Sometimes, however, they are perfectly opposite by pairs. In such cases as in the ash tree, the leaves will still remain in opposite pairs, in the decussate order, along the fully developed stem. In those buds which become the organs of fructification, these exceedingly minute distances between the places of insertion of the leafy rudiment, is never stretched out, or elongated at all, or very little. Hence the leaves of the calyx and the petals of the corol, remain in the whorled position. And in some cases their edges adhere together, forming the monophyllus calyx, or the monopetalous corol. But even in these cases, by close inspection we can often perceive, that the altering parts, (which appear by notched teeth, clefts, &c., at the top,) are thickened, or otherwise extended downwards, at their origin.

This order of developement (demonstrating the similar rudimental structure of leaf-buds and flower-buds,) does not stop with the calyx and corol; for the stamens and pistils are subject to the same law, and are perfectly analagous in their developements. Stamens are but modifications of the leaves infolded in the bud; and such leaves will become fully developed leaves, calyxes, corols, or stamens, according to circumstances as to soil, aspect, temperature, moisture, culture, &c. This may be fully demonstrated to the student, by referring him to fruit-bearing trees (for example, currant bushes,) which set well for flower-buds during one season, and are removed to an unfavorable situation before the next; more or less of the flower-buds will be developed into leaves and branches.

After students have carefully split large buds, collected from different species of trees, and examined them under the magnifier, let them watch the developement. Call their attention from time to time, to the extension or elongation of the exceedingly short axis or shaft, whereon the rudimental leaves in the bud are based. This elongation will be seen to progress considerably in a short time, if a branch is to be produced. As the season advances, the elongation of the branch will separate the leaves to great distances in some species. And the process will continue until the branch terminates in a bud at its extremity. In the mean time other buds will form in the axils of the leaves. But if a flower and fruit are to be produced, the axils will not become sensibly elongated. Consequently, the lower leaves (which were separated to great distances in the case of the stem and leaves,) remain in a whorl, called the calyx; higher ones remain in a whorl called the corol, still higher ones remain in a whorl called stamens, and the highest ones have their edges folded together, and become the pistil. The termination of the midrib of the last leaf becomes the style, with a moist or humid apex called the stigma.

The infoldings of one, or of several, of the terminal leaves of the flower-bud, in the production of the pistil, are exceedingly various and complicated. But the plant puts forth all its energies for a term of time, in producing and perfecting this organ; consequently it is the most perfect and most constant part, and furnishes the best characteristics for the descriptive or systematic botanist.

Circulation and food of Dicotyledonous plants. Under the magnifier, the student may be shown pores and hairs on the surface of plants, when in the rapidly growing state. Through these the fragrant or odoriferous oils are discharged, and acrid liquids are prepared as in the nettle;

circulating sap is exposed to the atmosphere, gases are absorbed and discharged. Vegetable food is inhaled from the atmosphere, sufficient to support some plants, (as the common live-forever,) for a long time.

It may be shown by inspection, (some directions are already given) that sap ascends by way of valvated tubes within the interior of the solid stem of plants, receives the necessary influence of the atmosphere through the pores of its tender herbaceous parts, (particularly the leaves,) and returns, thus improved, by way of analagous tubes, nearer the external surface. In this respect, the leaves of plants perform the office of the lungs of animals. In truth, a very close analogy is manifest, between the gills of fish (which serve them as lungs) and the leaves of plants.

Remark. The teacher will extend this part of the science of vegetables, as far as time and circumstances will permit. The general framework is here given; which, if illustrated by specimens, may induct the student to a correct method of pursuing his own inquiries.

TWENTY-TWO NATURAL GROUPS OF PHENOGRAMMOUS PLANTS.

Cotyledonous plants have never been wholly arranged into natural groups or orders. Linnæus commenced the labor; the two Jussieu's extended and greatly improved the work. De Lamanck, Brown, Decandolle, Lindley, and others, have subdivided most of the orders of Jussieu. To the orders of Jussieu, thus improved, the North American Genera are referred in this treatise, by numbers. See p. 9.

It is not required of students, that they should study the hundred Natural Orders of Jussieu, with almost as many subdivisions; but they ought to be able to recognize, at first sight, the characters of the most important orders in the plants belonging to them, by their habits.

The following examples of *groups* of plants, founded chiefly on general appearance, or habit, may serve to illustrate the uses of a Natural method. As some of these groups combine several natural orders, the technical names will not be applied.

MONOCOTYLEDONOUS GROUPS.

Parts of flowers mostly in threes, or multiples of threes. Calyx and corol either combined or alike, in color and texture. Stem without separable bark, wood, and pith, and it increases by central deposits. Leaves not articulated by stems, or very rarely; consequently they do not fall off. The veins of the leaves are not branched, though they are connected laterally by cross veins.

A. WILD TURNIP-LIKE PLANTS. (Aroideae.)

EXAMPLES. *Acorus*, (sweet flag;) *Orontium*, (golden club;) *Calla*, (water arum;) *Arum*, (wild turnip;) *Ictodes*, (skunk cabbage.)

Flowers monoecious, sessile on a spadix. Seed with the embryo in the axis of fleshy or mealy albumen, straight, terete, with a cleft on one side, in which the plumula lies. Prop. *Acrid*, *warming*, *stomachic*.

B. GRASS-LIKE PLANTS. (Cyperoideae and Gramineae.)

EXAMPLES. *Sedges*. Cyperus, Kilingia, Mariscus, (club-rush;) Scirpus, Eriophorum, (cotton grass;) Schoenus, (bog-rush;) Carex, (proper sedge.) *Grasses*. Agrostis, (red-top, bonnet-grass;) Phleum, (timothy grass;) Phalaris, (canary, or ribbon grass;) Alopecurus, (foxtail;) Milium, (millet;) Panicum, (barn-grass;) Anthoxanthum, (vernal-grass;) Arundo, (reed grass;) Avena, (oats;) Poa, (meadow-grass, blue grass;) Bromus, (chess;) Hordeum, (barley;) Triticum, (wheat;) Limnetis, (salt grass;) Secale, (rye;) Saccharum, (sugar-cane;) Sorghum, (broom corn;) Oryza, (rice;) Zea, (indian corn.)

Flowers glumaceous, (the glumes considered as bracts by some.) *The sedges* have angular stems; leaves without sheaths, or with closed ones; seed with albumen of its own form, lenticular embryo in the base of the albumen, plumula inconspicuous. *The grasses* have cylindrical stems; leaves with split sheaths; seed with albumen farinaceous, lenticular embryo on one side of the base of the albumen, cotyledon broad, plumula developed. Properties.—*Farinaceous food, tonic, sugary, and cattle fodder.*

C. LILY-LEAVED PLANTS. (Asparagi, Liliaceae, Asphodeli, and Narcissi.)

EXAMPLES. Smilax, (Jacob's ladder;) Uvularia, (bell-wort;) Asparagus, (asparagus;) Convallaria, (solomon seal, lily of the vally;) Trillium, (wake robin;) Tulipa, (tulip;) Lilium, (lily;) Erythronium, (adder-tongue;) Allium, (onion, chives;) Hyacinthus, (hyacinth;) Narcissus, (daffadil;) Galanthus, (snow-drop.)

Flowers without perianths, or with petal-like ones: corols in sixes of parts or petals, inferior. Seed with a testa; albumen fleshy, embryo included. Properties.—*Emollients, diuretic, moderately tonic.*

D. ORCHIS-LIKE PLANTS. (Orchideae.)

EXAMPLES. Goodyera, (rattlesnake weed;) Neottia, (lady's tresses;) Listera, (lily orchis;) Pogonia, (snake arethusa;) Corallorhiza, (coral root;) Anethusa, Orchis, Habenaria, (giant orchis;) Malaxis, (tway-blade;) Cypripedium, (lady's slipper.)

Gynandrous. Corols 5-petaled, (3 outer, 2 inner,) nectary petal-like: anthers 2 or 1 on the side of the style, or at the apex; stigma viscid; leaves nerved, entire. Seed with loose testa, no albumen, embryo a solid fleshy mass. Properties.—*Nutritious, emollient.*

DICOTYLEDONOUS GROUPS.

Parts of flowers mostly in fives, or some multiple of five, sometimes in twos, never in threes like Monocotyledonous. Stem with separable bark, wood, pith; increasing by depositions of matter between the wood and bark. Leaves, when joined by the stem, are always articulated, and may fall off or be removed by disjoining; and having branching veins.

E. DOCK-LIKE PLANTS. (Polygoneae and Atriplices.)

Rheum, (rhubarb;) Rumex, (dock;) Polygonum, (buck-wheat;) Chenopodium, (pig-weed;) Beta, (beet;) Spinacea, (spinach;) Phytolacca, (poke-weed.)

Calyx free, monophyllus: stamens in the bottom of the calyx: germ single. Leaves alternate. Seed with inconspicuous plumula; embryo curved or inverted. Properties.—*Nutritious vegetables, some farinaceous seeds, aperient and deobstruent.*

F. FOXGLOVE-LIKE PLANTS. (Pediculares and Scrophularia.)

EXAMPLES. Orobanche, (cancer root;) Epiphegos, (beech-drops;) Pedicularis, (louse-wort;) Veronica, (speedwell;) Scrophularia, (fig-wort;) Mimulus, (monkey flower;) Antirrhinum, (snap-dragon;) Gratiola, (hedge-hyssop;) Chelone, (snake-head;) Digitalis, (fox-glove;) Gerardia, (false fox-glove.)

Calyx divided, inferior, permanent: corol monopetalous: stamens 4 or 2. Seeds indefinite in number; embryo in the fleshy albumen, or at the apex. Properties.—*Acrid or astringent, antiscorbutic, somewhat poisonous.*

G. POTATO-LIKE PLANTS. (Solaneae.)

EXAMPLES. Solanum, (potato, bitternut;) Hyoscyamus, (henbane;) Datura, (thorn-apple;) Capsicum, (kian, or red pepper;) Nicotiana, (tobacco;) Verbassum, (mullein;) Atropa, (nightshade.)

Calyx 5-parted, corol monopetalous, 5-cleft: stamens on the corol. Seed numerous; embryo curved, in fleshy albumen, radicle next the hilum. Properties.—*Herbage and fruit poisonous; most roots are wholesome and nutritious.*

H. MINT-LIKE PLANTS. (Labiatae.)

EXAMPLES. Lavendula, (lavender;) Rosmarinus, (rosemary;) Lycopus, (bugle weed;) Mentha, (mint;) Satureja, (savory;) Thymus, (thyme;) Hyssopus, (hyssop;) Pycnanthemum, (wild basil;) Origanum, (marjoram;) Teucrium, (wood-sage;) Collinsonia, (horse balm;) Monarda, (mountain mint;) Nepeta, (catnip;) Glechoma, (gill;) Melissa, (balm;) Leonurus, (mother-wort;) Marrubium, (hoarhound;) Hedeoma, (pennyroyal;) Scutellaria, (scull-cap;) Salvia, (sage;) Prunella, (heal-all.)

Flowers lipped, didynamous; stems 4-sided; leaves opposite: stigmas 2-cleft; seeds naked, erect, scarcely any albumen, embryo erect, cotyledons flat. Properties.—*Tonic, cordial, stomachic; abounding in volatile, aromatic oil.*

I. BORAGE-LIKE PLANTS. (Boragineae.)

EXAMPLES. Pulmonacia, (lungwort;) Myosotis, (forget-me-not, scorpion weed;) Symphitum, (comfrey;) Lithospermum, (wheat-thief;) Borago, (borage;) Onosmodium, (gromwell;) Cynoglossum, (hound-tongue;) Heliotropium, (turnsale.)

Calyx and corol 5-lobed, tubular; leaves alternate, scabrous: stamens 5, styles 1: seed destitute of albumen, embryo with a superior radicle, cotyledons plano-convex parallel with the axis. Properties.—*Emollient, mucilaginous; some are tonic.*

J. MILKWEED-LIKE PLANTS. (Apocynaceae.)

EXAMPLES. *Asclepias*, (milkweed;) *Cynanchum*, (choak-dog;) *Apocynum*, (dogbane, wandering milkweed;) *Gonolobus*, (false choak-dog.)

Germ double, with the apexes connected by a tub-like stigma, from the top of which five pair of anthers are suspended. Fruit a follicle; seed with cartilaginous albumen, testa simple, embryo straight or foliaceous, plumula inconspicuous, radicle superior. Properties.—*Acrid, stimulating, emetic, sudorific.*

K. WINTERGREEN-LIKE PLANTS. (Ericaceae.)

EXAMPLES. *Arbutus*, (bear-berry;) *Gaultheria*, (wintergreen;) *Andromeda*, (white-bush;) *Kalmia*, (laurel;) *Rhododendron*, (rosebay;) *Ledum*, (labrador tea;) *Epigaea*, (trailing arbutus;) *Azalea*, (honey-suckle;) *Vaccinium*, (whortleberry;) *Oxycoccus*, (cranberry;) *Chimaphila*, (pipsissiwa, prince's pine;) *Pyrola*, (shinleaf;) *Monotropa*, (bird-nest;) *Hypopithys*, (yellow beech-drops;) *Pterospora*, (Albany beech-drops.)

More or less shrubby, with evergreen leaves; calyx and corol 4 or 5-cleft: anthers 2-celled, opening by an appendaged pore: seed minute, testa adhering to the nucleus; embryo cylindrical in the axis of fleshy albumen, radicle opposite the hilum.

L. SUNFLOWER-LIKE PLANTS. (Compositae.)

EXAMPLES. *Cichorium*, (endive;) *Hieracium*, (hawkweed;) *Prenanthes*, (white lettuce;) *Leontodon*, (dandelion;) *Tragopogon*, (vegetable oyster;) *Lactuca*, (lettuce;) *Centaurea*, (blue bottle;) *Calendula*, (pot marigold;) *Cnicus*, (thistle;) *Carthamus*, (false saffron;) *Arctium*, (burdock;) *Cynara*, (garden artichoke;) *Liatris*, (gay-feather;) *Gnaphalium*, (life-everlasting;) *Tagetes*, (marigold;) *Inula*, (elecampane;) *Erigeron*, (fleabane;) *Aster*, (starwort;) *Solidago*, (golden rod;) *Bellis*, (daisy;) *Tussilago*, (coltsfoot;) *Eupatorium*, (boncset, joe-pie;) *Senecio*, (ragwort;) *Bidens*, (beggar-tick;) *Helianthus*, (sunflower;) *Chrysanthemum*, (ox-eye daisy;) *Anthemis*, (mayweed, chamomile;) *Tanacetum*, (tansey;) *Achillea*, (yarrow;) *Artimisia*, (wormwood;) *Xanthium*, (clott-bier;) *Ambrosia*, (hog-weed.)

Calyx becoming egret on the germ: anthers of 5 stamens united into cylinder: stigmas 2, united or distinct: seed solitary erect, embryo with a terete inferior radicle, albumen none. Properties. Those with all the florets ligulate are mostly *milky and anodyne and seccrants*. Those with tubular florets and very fleshy receptacles are *seccrant stimulants, and cathartic when the odor is nauseous*. Those with tubular and ligulate florets and receptacles not very fleshy, with corymbed inflorescence, are *tonics and seccrant stimulants*.

M. CARROT-LIKE PLANTS. (Umbellifereae.)

EXAMPLES. Coriandrum, (coriander;) Carum, (caraway;) Daucus, (carrot;) Anethum, (fennel, dill;) Pastinaca, (parsnip;) Apium, (parsley, celery;) Ligusticum, (lovage;) Uraspermum, (sweet cicely;) Cicuta, (water hemlock;) Conium, (poison hemlock;) Sium, (water parsnip;) Heracleum, (cow parsley.)

Inflorescence an umbel. petals and stamens 5, on the germ; styles 2: fruit 2-partible, becoming 2 seeds, often with 5 primary and 4 secondary alternating ribs, embryo minute at the base of the horny albumen, radicle pointing to the hilum. Properties.—*Seeds stomachic and carminative; but if nauseous scented, poisonous—the roots of the nauseous scented are deadly poison in the spring, just before sprouting.*

N. CROWFOOT-LIKE PLANTS. (Ranunculacea, Papaveraceae.)

EXAMPLES. Clematis, (virgin bower;) Thalictrum, (meadow rue;) Anemone, (wind flower;) Ranunculus, (crowfoot;) Aquilegia, (columbine;) Caltha, (cowslip;) Coptis, (gold thread;) Nigella, (fennel flower;) Delphinium, (larkspur;) Aconitum, (monk's hood;) Actaea, (bane berry, neclace;) Macrotys, (cohosh;) Paeonia, (peony;) Papaver, (poppy;) Sanguinaria, (bloodroot;) Chelidonium, (celandine;) Nymphaea, (pond lily;) Nuphar, (water lily;) Nelumbium, (sacred bean;) Podophyllum, (mandrake;) Saracenia, (side-saddle.)

Flowers many-petalled with or without a many-leaved calyx: stamens many indefinite: seeds many: most of its organs of fructification indefinite and numerous, excepting the pistil in the Poppy-like plants.

Properties.—*All have roots more or less narcotic; some produce acrid caustic juices; some produce anodyne juices, and some have astringent roots.*

O. RADISH-LIKE PLANTS. (Cruciferae.)

EXAMPLES. Cheiranthus, (julyflower;) Cardamine, (water-cress;) Turrites, (tower mustard;) Arabis, (wall-cress;) Dentaria, (tooth-root, trickle;) Draba, (whitlow grass;) Cochlearia, (horse radish;) Thlaspi, (shepherd-purse;) Hesperis, (rocket;) Lepidium, (pepper-grass;) Sinapis, (mustard;) Brassica, (cabbage, turnip;) Raphanus, (radish.)

Petals 4, cross-form by their laminae: tetradynamous: germ often glandular at the base: seed in a silique, albumen none, embryo with the radicle folded upon the cotyledons. Properties.—*Universally antiscorbutic, and more or less pungent to the taste: highly nutritious, some by the herbage others by the root; both of which in many cases are valuable condiments. They all contain considerable nitrogen.*

P. MALLOWS-LIKE PLANTS. (Malvaceae, and Geraniae.)

EXAMPLES. Geranium, (geranium;) Oxalis, (wood sorrel;) Tropeolum, (nasturtion;) Althea, (hollyhock;) Malva, (mallows;) Sida, (indian mallows;) Hibiscus, (mash mallows;) Gossypium, (cotton.)

Stamens monodelphous, united in a column: leaves alternate: seed without albumen, embryo curved, cotyledons doubled or convolute.

Properties.—Mucilaginous, emollient, some are moderately astringent.

Q. PINK-LIKE PLANTS. (Caryophyllaeae.)

EXAMPLES. Dianthus, (pink, carnation;) Silene, (catch-fly;) Saponaria, (soapwort;) Lychnis, (ragged robin;) Cucubalus, (bladder campion;) Sagina, (pearlwort;) Mollugo, (carpet weed;) Spargula, (spurry;) Stellaria, (starwort;) Arenaria, (sandwort;) Cerastium, (chickweed.)

Calyx and corol 4 or 5-toothed or leaved: ovary stiped: capsule 2-5 valved, with a central placenta or columella: embryo of the seed curved round the mealy albumen; radicle pointing to the hilum: stem tumid at the joints: leaves always opposite and entire.

Properties.—*Softening, mucilaginous, and of little taste or activity.*

R. ROSE-LIKE PLANTS. (Rosaceae.)

EXAMPLES. Fragaria, (strawberry;) Potentilla, (fivefinger;) Dalibarda, (dry strawberry;) Agrimonia, (agrimony;) Geum, (avens;) Cornarum, (marsh fivefinger;) Rubus, (raspberry;) Rosa, (the rose;) Spiraea, (steeple bush, hardhack;) Aronia, (shad bush, june-berry;) Mespilus, (medlar;) Crataegus, (thorn;) Pyrus, (apple, quince, pear;) Sorbus, (mountain-ash;) Prunus, (plum, cherry;) Amygdalus, (peach, almond.)

Calyx 5—10 lobed; petals 5 with short claws; stamens numerous—all inserted on the calyx: seeds straight with a short terete radicle pointing to the hilum, cotyledons flat, albumen often nearly obliterated, stems herbaceous, or woody.

Properties.—*Herbage astringent or tonic; succulent fruit a remarkably cooling febrifuge, and aperient; the bark and seeds of the Prunus, Sorbus, and Amygdalus, contain prussic acid.*

S. PEA-LIKE PLANTS. (Leguminosae.)

EXAMPLES. Baptisca, (wild indigo;) Crotolaria, (rattle-box;) Indigofera, (indigo;) Galega (goat-rue;) Astragalus, (milk-vetch;) Dolichos, (cowhage;) Pisum, (pea;) Phaseolus, (bean;) Lathyrus, (sweet pea;) Lupinus, (lupine;) Vicia, (vetch;) Cicer, (chick pea;) Arachis, (peanut;) Ulex, (furze;) Spartium, (broom;) Amorpha, (lead-plant;) Vexillaria, (butterfly weed;) Hosackia, (pencil-pod;) Trifolium, (clover, trefoil;) Medicago, (yellow clover;) Melilotus, (melilot clover;) Lespedeza, (bush clover;) Hedysarum, (bush trefoil;) Glycyrrhiza, (liquorice;) Colutea, (bladder senna;) Robinia, (locust tree;) Gleditschia, (honey locust;) Cercis, (judas tree;) Cassia, (senna;) Polygala, (senna root, mountain flax;) Corydalis, (colic weed.)

Corols mostly papilionaceous: stamens generally 10, 9 of which united by the filaments: fruit a legume pod: seed attached to one suture, cotyledons fleshy without albumen, embryo straight, or with the radicle bent back upon the cotyledons. Properties.—*Nutritious, antiscorbutic, aperient.*

T. CUCUMBER-LIKE PLANTS. (Cucurbitaceae.)

EXAMPLES. Passiflora, (passion flower;) Cucumis, (cucumber, musk melon;) Cucurbita, (melon, gourd, squash, pumpkin;) Momordica, (balsam apple;) Melothria, (creeping cucumber;) Sicyos, (single-seed cucumber.)

Calyx adhering to the germ, flowers mostly diclinous: stamens 5, styles short, stigmas thick, fringed or velvety: fruit fleshy, succulent: seed flat, ovate, arilled; testa leathery; embryo flat, radicle next to the hilum; no albumen, cotyledons foliaceous. Properties.—*Herbage when nuceous, cathartic; succulent fruit aperient and somewhat nutritious, but cathartic and poisonous if nuceous scented.*

U. CHESNUT-LIKE PLANTS. (Amentaceae.)

EXAMPLES. *Ulmus*, (elm;) *Celtis*, (hoop-ash;) *Quercus*, (oak;) *Fagus*, (beech;) *Castanea*, (chestnut;) *Corylus*, (hazlenut;) *Betula*, (birch;) *Alnus*, (alder;) *Carpinus*, (hornbeam, blue-beech;) *Ostrya*, (hop-hornbeam, iron-wood;) *Salix*, (willow;) *Populus*, (poplar;) *Platanus*, (button wood;) *Liquidambar*, (sweet gum;) *Comptonia*, (sweet-fern;) *Myrica*, (bayberry.)

Staminate flowers in aments: fruit bony, leathery, or membranaceous: seed with a flat straight corcle: stems all woody. Properties.—*Tonic or astringent; some are stomachic and a few emollient.*

V. PINE-LIKE PLANTS. (Coniferae.)

EXAMPLES. *Juniperus*, (cedar, juniper;) *Thuja*, (arbor vitae, white cedar;) *Cupressus*, (common white cedar;) *Pinus*, (pine tree, spruce, fir, larch, hemlock tree;) *Taxus*, (yew, shin bush;) *Cycas*, (sago plant.) Seeds purely naked, not covered by testa, nor a skin-like envelope.* They are mucilaginous or oily; leaves pinnate, or acerose-linear, with parallel veins. Always woody. Pistillate flowers in strobiles.

Properties.—*Balsamic, stomachic, healing, emollient.*

* All seeds but those of this order have a testa, skin, or membranous covering. These, and these only, are truly naked. The gymnospermia of Class Didynamia, are naked as it respects the pericarp. But the seeds of that order have the covering here referred to.

GLOSSARY

OF

TERMS USED IN THE GENERIC AND SPECIFIC DESCRIPTIONS OF THIS TREATISE.

A.

Accumbent, lying on; in *Cruciferae*, a radicle lies upon the edge of the Cotyledons.
Acerose, needle-pointed.
Acicular, needle-shaped.
Acinaciform, scimitar-shaped.
Acini, small grains in strawberries, &c.
Aculeate, prickles.
Adnate, adhering to.
Agglomerated, in a heap.
Albumen, the substance under the inner coat of the testa, surrounding the embryo.
Amplexicaul, stem-clasping.
Androgynous, staminate.
Anfractuose, turnings and windings.
Anterior, in front.
Anthelmintic, killing worms.
Antheriferous, bearing anthers.
Antiseptic, against putrefaction.
Aperient, loosening.
Apetalous, without petals.
Apex, summit, point.
Apiculus, small point.
Apophysis, a swelling.
Appendix, attached.
Appressed, close upon something.
Approximated, near together.
Apterous, without wings.
Aquatic, in water.
Aborescent, tree-like.
Arcuate, curved.
Areolæ, areas between cracks.
Arillus, process, adhering to the hilum.
Aristate, bearded.
Aroma, spicy quality.
Articulation, joint.
Asci, tubes of sporules.
Assurgent, rising upward.

Attenuate, made slender.
Auriculated, ear-like.
Awns, beard.
Axillary, in axilla, armpit.
Axis, the line through any thing.

B.

Baccate, berried.
Beak, like the bill of a bird.
Bicuspidate, twice pointed.
Bidentate, double-toothed.
Bifarious, in two rows.
Bifid, two cleft.
Bilabiate, two lips.
Bilobed, two lobes.
Binate, growing two together.
Bipartible, capable of being parted in two.
Bipinnate, twice pinnate.
Bipinnatifid, twice pinnatifid.
Bisaccate, two little sacks.
Brachiate, having arms.

C.

Caducous, falling off soon.
Cæsious, grey.
Cæspitose, in tufts.
Calcarate, spurred.
Calciform, like a shoe.
Callous, hardened.
Calyxine, belonging to a calyx.
Calyculated, additional calyx.
Canaliculate, channelled.
Cancellate, latticed.
Cunescens, approaching to white.
Carinate, keel-shaped.
Cariopsis, indehiscent pericarpium adhering to the seed which it contains, as the grain of grasses.
Carnosc, fleshy.
Carpella, the small parts out of which compound fruit is formed.

Caudate, tailed.
Caudex, stem.
Cauline, on the stem.
Ceraceous, wax-like.
Cernuous, nodding.
Chalaza, a spot on the seed, indicating where the vessels of the raphe terminate.
Cinereous, ash-colored.
Circinately, curled round.
Cirrhone or *Cirrhous*, tendrilled.
Clathrate, latticed.
Clavate, club-shaped.
Clavus, ergot.
Claws, taper base.
Clinandrium, column of orchideous plants in which the anther lies.
Clypeate, like a buckler.
Cobicebbed, with loose hairs.
Coccus, a grain or seed.
Cochleate, resembling the shell of a snail.
Columella, axis of the fruit. See *Placenta*.
Columnar, formed like columns.
Comose, terminated by sterile bractæ.
Concrete, hardened into one mass.
Confluent, running into one another.
Conglobated, collected into a spherical form.
Conjugate, joined in pairs.
Convolute, rolled together.
Coralloid, like coral.
Cornute, horned.
Corona, a crown, crown-like cup.
Corrugated, wrinkled.
Cortical, of the bark.
Corymb, a raceme or panicle in which the stalks of the lower flowers are longer than those of the upper.
Costate, ribbed.
Cotyledons, seed leaves.
Cowled, hood of a monk.
Crenate, notched.
Crest, elevated appendage.
Cribiform, like a sieve.
Cruciate, shaped like a cross.
Cucullate, hooded, cowled.

Culm, stem of grasses.
Culmiferous, producing culms.
Cultrate, like a couler.
Cupule, cup of an acorn.
Cuticle, epidermis.
Cyathiform, cup-shaped.
Cymbiform, boat-shaped.

D.

Decandrous, ten stamens.
Deciduons, falling off.
Declinate, curved downwards.
Decompond, twice pinnated.
Decorticated, disbarked.
Decussated, cross at right angles.
Deflexed, turned downwards.
Dehiscent, gaping, burst open.
Deliquescent, melting away.
Delta-leaved, shaped like Greek Δ .
Denticulate, finely dentate.
Dentiform, tooth-shaped.
Dependent, hanging down.
Depressed, pressed downwards.
Develop, to unfold and extend rudimental organs or parts. Such as the unfolding of the rudiments of leaves, branches, flowers, and fruits contained in, or composing, buds, bulbs, or seeds.
Diandrous, having two stamens.
Diaphanous, transparent.
Diaphoretic, promoting perspiration.
Diclinous, stamens and pistils in different flowers.
Didymous, two united.
Didynamous, two long stamens and two short ones.
Diffuse, scattered, widely spread.
Digynous, two styles.
Dimidiate, divided into two parts.
Discus, fleshy process that surrounds the ovary; a leaf; centre of a head of flowers.
Dissepiment, partitions.
Distichous, two-rowed.
Dizaricate, in a straggling manner.
Dodecandrous, having twelve stamens.
Dolabriform, axe-shaped.
Dorsal, on the back.

E.

- Ensate*, shaped like a sword.
Epidermis, outer skin of bark.
Epiphyllous, upon a leaf.
Equitant, edges alternately overlap each other.
Eroded, gnawed.
Evanescent, vanishing.
Evolved, unfolded.
Excoriate, stripped of the bark.
Exotic, foreign.
Exserted, projecting.

F.

- Fauces*, jaws.
Favose, pitted like a honeycomb.
Fimbriate, fringed.
Flexile, pliable.
Flocci, little tufts like wool.
Floral envelopes, the calyx, bractæ and corolla, which envelop the inner parts of the flower.
Florets, little flowers which constitute compound flowers.
Floriferous, bears flowers.
Flosculous, tubulose monopetalous florets.
Foliaceous, form of leaves.
Follicle, seed-vessel opening one side only.
Footstalks, the stalks of flowers or leaves.
Fornicate, arched.
Frond, leaves of cryptogamia.
Frutescent, or *Fruticose*, shrubby.
Fugacious, lasts for a short time.
Fulvous, tawny yellow.
Funicle, the little stalk by which a seed is attached to the placenta.
Furcate, forked.
Furfuraceous, scurfy.
Fuscous, blackish brown.
Fusiform, spindle-shaped.

G.

- Galeate*, helmeted.
Gelatinous, consisting of jelly.
Geminate, doubled.
Gemmæ, leafy buds.
Germ, or *Germen*, ovarium.
Germination, first act of vegetation.

- Gibbous*, protuberant.
Grained, have tubercles.
Gynandrous, stamens and style combined.

H.

- Habit*, general appearance of a plant.
Hastate, like the head of a halbert.
Hermaphrodite, having stamens and pistils.
Hexagonal, six-sided.
Hexandrous, six stamens.
Hilum, scar on a seed by which it adhered to the placenta.
Hoary, white down.
Homogeneous, uniform.
Hyaline, transparent.
Hybrid, the nature of two species.
Hygrometrical, indicating the approach of moisture.
Hypocrateriform, salver-shaped.
Hypogynous, below the ovarium.

I.

- Incrassated*, thicker by degrees.
Incurved, bending inward.
Indigenous, native.
Indurated, hardened.
Indusium, membrane that closes the thecæ of ferns.
Inflexed, bending inward.
Inflorescence, disposition of flowers.
Inspissated, thickened.
Internodes, space between joints.
Involucrc, bractæ of Umbelliferæ.
Involute, rolled inwards.

K.

- Knccd*, bent like the knee joint.

L.

- Lacinia*, segments.
Laciniate, cut into segments.
Lactescant, milky.
Lacunæ, little pits.
Lamellated, divided by plates.
Lamina, leaf considered without its petiole.
Lateral, one side.

Lenticular, like a lens.
Leprous, with spots or scales.
Ligulate, strap-shaped.
Linguiform, tongue-shaped.
Locular, cells.
Loment, legume divided crosswise.
Lunate, half-moon.
Lurid, a color between purple, yellow, and grey.

M.

Medullary, relating to the pith.
Midrib, the vein which passes from the petiole to the apex of a leaf.
Monadelphous, filaments cohering in a tube.
Monandrous, having one stamen.
Monocotyledons, having one seed lobe.
Monosepalous, having one sepal or division of the calyx.
Mucronate, pointed.

N.

Naiades, nymphs of the springs and fountains.
Narcotic, producing torpor.
Navicular, boat-shaped.
Nidus, nest.
Nodose, having knots.
Nodules, small hard knots.
Nucleus, the kernel.

O.

Ochraceous, color of yellow ochre.
Octandrous, having eight stamens.
Octogynous, having eight styles.
Officinal, used in shops.
Operculum, a lid.
Orifice, an opening.
Ossified, become like bone.
Ovarium, the part of the flower in which the young seeds are contained.
Ovules, the young seeds of plants contained in the ovarium and attached to the placenta.

P.

Palate, mouth of a ringent flower.
Paleaceous, chaffy.

Panduriform, figure of a fiddle.
Pappus, crown of the fruit of Compositæ.
Papulose, pimples.
Parenchyma, parts of plants which consist of cellular tissue only.
Parietal, being attached to the sides of an ovarium instead of its axis.
Patulous, spreading.
Pectinate, teeth of a comb.
Pedicels, small footstalks of flowers.
Pellicle, a thin skin.
Pellucid, transparent.
Pendulous, hanging down.
Pentagonal, having five angles.
Pentagynous, having five styles.
Pentandrous, having five stamens.
Perennial, lasting many years.
Perichætal, leaves which in mosses surround the base of the stalk of the theca.
Periginous, inserted into the calyx.
Péristome, the rim which surrounds the orifice of the theca of a moss.
Perithecium, different kinds of envelopes of the reproductive organs of Fungi.
Persistent, not falling off.
Petaloid, like a petal.
Phenogamous, plants visibly with stamens.
Pileus, the cap of a mushroom.
Piliferous, bearing hairs.
Pilose, slightly hairy.
Pinnæ, segments of a pinnated leaf.
Pinnatifid, a leaf divided from the margin nearly to the midrib.
Pinnules, the leaflets of pinnate leaves.
Pisiform, like peas.
Placenta, the receptacle or columella to which the rudiments of future seeds (carpella,) are fastened to the hilum. It is within the germ (ovarium,) being at the axis, whether central or lateral.
Plumose, feathery.
Plumula, the young leaves in the embryo.

Polygamous, applies to plants some of whose species are diclinous, and some perfect.

Polygynous, having numerous styles.

Polypetalous, having many separate petals.

Polyspermous, having many seeds.

Pores, apertures.

Precocity, ripe before the usual time

Processes, protrusions.

Proliferous, forms young plants or sprouts.

Pubescent, down, closely pressed to the surface.

Pulvinate, cushion-shaped.

Punctiform, like points.

Pungent, stinging or pricking.

Pustules, blisters.

Pyriform, shaped like a pear.

Q.

Quadrangular, four-angled.

R.

Radius, ray of compound flowers.

Raphe, in seeds this is the channel of vessels which connects the chalaza with the hilum.

Recesses, sinuses of lobed leaves.

Refrigerant, producing coolness.

Repend, a margin undulated.

Replicate, folded back.

Resupinate, inverted in position.

Reticulated, resembling a net.

Revolute, rolled back.

Rhomboid-ovate, rhomboidally egg shaped

Rib, projecting vein.

Rostrate, beaked.

Rotate, corolla, the limb flat, the tube very short.

Rudiment, the first and imperfect original of any thing. As the folded incipient organs of leaves, branches, flowers, and fruit in a bud: or the elements of the future culm, leaves, and head, contained in a kernel of wheat. When an organ is imperfectly developed.

Rufous, reddish, rusty.

S.

Saccate, bagged.

Sagittate, like an arrow-head.

Samarā, winged seed vessel.

Scandent, climbing.

Scariose, membranous and dry.

Serobiculate, little pits or hollows.

Scurfy, scales resembling scurf.

Scutate, like an ancient round buckler.

Secund, on one side.

Sedges, marsh grass.

Seminal, belonging to the seed.

Sepals, segments of the calyx.

Septa, partitions.

Setæ, bristles.

Setiform, like a bristle.

Setigerous, or *Setose*, covered with bristles.

Sori, patches of fructification on the back of the fronds of ferns.

Spathix, a spike protracted from a spatula.

Sphaecelate, withered or dead.

Spherules, minute spheres.

Spiral, circularly involved.

Sporules, in Cryptogamous plants answers to seeds.

Squamiform, like scales.

Squarrose, spreading, ragged.

Standard, upper segment of the flower of Leguminosæ.

Stellate, in the manner of a star.

Sterile, barren.

Stimuli, stinging hairs.

Stipes, the stalk of Fungi.

Stoloniferous, with creeping roots.

Striæ, small streaks, channels.

Striated, having striæ.

Strigose, having irregular hairs.

Suffruticose, shrubby in a slight degree.

Sulcate, furrowed.

Supernatant, floating on the surface

Sureuli, young shoots.

Suture, the cohesion of two parts.

T.

Terebinthinate, turpentine.

Tessellated, variegated by squares.
Testa, skin or integument of the seed.

Tetrandrous, having four stamens.

Tetrapetalous, having four petals.

Thalamus, that part of a flower below the ovarium and sometimes supports the outer envelopes.

Thallus, that part which bears the fructification of Lichens.

Theca, cases that contain the spores of Cryptogamic plants.

Throat, the orifice of a flower.

Thyrse, dense panicle.

Torose, alternately elevated and depressed.

Tortuose, twisted.

Torus, same as thalamus.

Trapezoid, like a trapezium.

Trichotomous, branches divided in threes.

Tricuspidate, having three points.

Trifid, divided in three.

Tritelocular, having three cells.

Triquetrous, having three sides.

Tuberculate, covered with knobs or tubercles.

Tuberous, fleshy roundish roots.

Tumid, swelling.

Tunic, a coat.

Turgid, puffed up.

U.

Umbilicus, the cord which attaches the seed to the receptacle.

Umbonate, bossed.

Unarmed, destitute of prickles or spines.

Uncinate, hooked.

Undulate, waved.

Unguis, the taper base of a petal.

Unilateral, one-sided.

Unilocular, one-celled.

Urceolate, pitcher-shaped.

Utricle, little bladder.

Uvula, gland of the throat.

V.

Varicose, swollen here and there.

Vascular, consisting of tissue in a very succulent enlarged state.

Vaulted, like the roof of a vault.

Ventricose, inflated.

Vernal, belonging to the spring.

Versatile, swinging.

Vertex, uppermost point.

Vesicles, resembling bladders.

Vexillum, a standard.

Viscid, adhesive.

Viviparous, bearing young plants in the place of flowers and seed.

Z.

Zones, stripes or belts.

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N. B. English names have Botanical Genera annexed, which may be found alphabetically. Long names are abbreviated; and the two first letters, only, are used, when the English and Botanical names are the same. When a figure follows the generic name, it is the number of the species to which the English name belongs.

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 Flag, Iris. Grass, Poa, &c.
 Flat-top, Vern. Grass-pink, Cym.
 Flax, Linum. Grass-poley, Lyt.
 Flax-seed, Lem. Gravel chickweed, Sel-
 Flax-vine, Cus. era.
 Fleabane, Erig. Greek valerian, Pole.
 Flower-de-luce, Iris. Gromwell, Lit. Onos.
 Flowering-fern, Osm. Ground-flower, Polyga.
 Flowering nettle, Galeo. Ground ivy, Gle. [2
 Flow. wintergreen, Polyga. 3. Ground-nut, Apios.
 Flow. an hour, Hib. 8 Ground-pine, Lycopo.
 Fog-fruit, Zap. Groundsell, Sen. 1
 Forget-me-not, Myoso. Ground-star, Geas.
 Fork-fern, Aer. [2. Guelder-rose, Vib. 12
 Fork-stems, Rice. Guinea-hen flower, Frit
 Forty-not, Achy. Guinea-pepper, Caps.
 Four-o'clock, Mir.
 Foxglove, Digitalis. H.
 Fox-tail, Alo. Haekmataek, Pin. 15
 Fringe tree, Chion. Hagberry, Celtis.
 Fritillary, Frit. Hair-bell, Campa. 1
 Frost plant, Cis. 1 Hair-cap, Polyt.
 Fumitory, Fum. Hair-grass, Air.
 Funegreek, Trigo. Hardhack, Spir.
 Furze, Ulex. Hawk-weed, Hiera.
 Hawthorn, Crat. 12
 Hazlenut, Coryl. 1
 Healall, Ped.
 Heart's ease, Pol. 12
 Heath, Erieta. Hud.
 Hedgehog, Med.
 Hedge hyssop, Grat.
 Lind.
 Hedge nettle, Stac.
 Hellebores, Helle.
 Hemlock, Coni.
 Hemlock tree, Pinus. 4
 Hemp, Cannabis.
 Hemp-weed, Eupa. 1
 Henbane, Hyo.
 Henbit, Lam.
 Herb-Robert, Geran. 5
 Herb-Bennet, Geum. 1
 Herd's grass, Phle.
 Hickony, Cary.
 Highwater, Iva.
 Hoarhound, Ball. Marr.
 Hogweed, Amb.
 Holly, Ilex.
 Hollyhock, Alt.
 Honesty, Lun. 1
 Honey-locust, Gled.
 Honeysuckle, Aza.
 Hood-wort, Seut.
 Hoop-ash, Celt.
 Hop, Hum, Med.
 Horehound, Marr.
 Hornbean, Ost.
 Horn-wort, Ceratop.
 Horse-balm, Col.
 Horse-chesnut, Aes.
 Horse-ginseng, Trio.
 Horse-radish, Coeh. 4
 Horse-tail, Equ.
 Hound-tongue, Cynog.
 Houseleek, Sem.
 Hyacinth, Hyac
 Hydrangea, Hor, Hyd.
 Hyssup, Hys.
 I.
 Ice plant, Mesem.
 Indian corn, Zea.
 Indian cress, Trop.
 Indian hemp, Apoc.
 Indian Physic, Gil.
 Indian reed, Cinn.
 Indian turnip, Arum.
 Indigo, In, Bap.
 Ink-berry, Prin.
 Innocence, Hous.

G.

Garlick, Allium. 12

Iris, Iris.
 Iron-wood, Corn.
 Itch-weed, Vera.
 Ivy, Hedera.

J.

Jacoea, Amary.
 Jacob's ladder, Smi.
 Jasmine, Jas.
 Jerusalem cherry, Sola.
 Jewel-weed, Impa. 1 [8
 Job's tears, Coix.
 John's wort, Hype.
 Joe-pye, Eupa. 15
 Joint-weed, Polyg. 17
 Janquil, Narc. 3
 Juda's tree, Cere.
 July flower, Cheir.
 June-berry, Aro.
 Juniper, Juni. 1

K.

Kinnikinnik, Arb.
 Kingspear, Asph.
 Knowel, Schlera
 Knot-grass, Polyg. 1
 Knot-weed, Polyg. 6

L.

Labrador tea, Led.
 Lady's mantle, Alc.
 Lady's slipper, Cypr.
 Lady's thumb, Polygo.
 Lady's tresses, Neo. [12
 Lamb Lettuce, Fed.
 Larh, Pinus. 18
 Larkspur, Del.
 Laurel, Ka. Mag.
 Laurestine, Vib. 13
 Lavander, Lavan. Stat.
 Lead-plant, Amo.
 Leather-leaf, Androm. 7
 Leather-wood, Dir.
 Leek, Allium. 11
 Lemon tree, Cit.
 Lettuce, Lac.
 Lichens, Lichenes.
 Lichnidia, Phlox.
 Lichnis, Li.
 Life everlasting, Gna.
 Lilac, Syr.
 Lily, Lil.

Lily of the valley, Conv
 Line-grass, Elym.
 Lime tree, Tilia.
 Liquorice, Gali. 11
 Live-forever, Sed. 5
 Lizard-tail, San.
 Locust, Rob.
 Lobelia, Lob.
 Lopseed, Phry.
 Loosestrife, Gaur. Lys.
 Lovage, Ligusti.
 Love-apple, Sola. 6
 Love bleeding, Amara.
 Love vine, Cuscuta. [12
 Louse-wort, Ped.
 Lucerne, Med.
 Lung-wort, Pul.
 Lupine, Lupinu.

M.

Madder, Gali, Rubi.
 Madeira-nut, Jug. 3
 Maddog weed, Ali.
 Mad-wort, Cam.
 Magnolia, Mag.
 Mahogany, Swi.
 Maiden-hair, Adi.
 Malabar-nut, Just.
 Mallows, Hib. Lav. Mal
 Mandrake, Podop.
 Mangle, Avi.
 Mangrove, Rhiz.
 Maple, Acer.
 Mare's tail, Hippu.
 Marjorom, Ori.
 Marsh 5-finger, Com.
 Marsh-mallows, Alt,

Hib.

Marsh rosemary, Stat.
 Marygold, Cale, Tag.
 Master-wort, Hera.
 Mat-grass, Nard.
 Matrimony, Lyci.
 May apple, Podop.
 May weed, Anthe. 2
 Meadow-grass, Alo.
 Meadow-rue, Thalic.
 Meadow-sweet, Spi. 1
 Mechoacan, Convo.
 Medlar, Aro, Mesp.
 Melic grass, Melic.
 Melilot clover Melil.

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Mercury, Acal. Chen.
 Mermaid, Fl, Prose.
 Mezereon, Dap.
 Mignonette, Re.
 Milfoil, Achi. Myrio.
 Milk-weed, Acera. Asc.
 Millet, Mil.
 Mint, Menth. 4
 Missletoe, Vis.
 Mitre-wort, Tia.
 Mock orange, Phila.
 Mollucca balm, Molu.
 Monkey flower, Mim.
 Monk's hood, Acon. 1
 Moon-seed, Meni.
 Moon-wort, Bot.
 Moose-wood, Dir.
 Morning glory, Convo.
 Moschatel, Adox.
 Moss-bush, Androm.
 Mother-wort, Leonn.
 Mould, Mucor,
 Mountain flax, Polyga. 5
 Mountain leek, Allium 3
 Mountain mint, Mona. 1
 Mountain pink, Phlox. 8
 Mountain rice, Oryzo.
 Mouse-ear, Gn. 4
 Mudwort, Lim.
 Mugwort, Art. 6
 Mulberry, Brou. Morus
 Mullein, Verba.
 Mushroom, Ayar.
 Muskmelon, Cucum. 4
 Mustard, Sin.
 Myrtle, Myrica.

N.

Narcissus, Nar.
 Nasturtion, Trop.
 Navel-wort, Hydroco.
 Neck-weed, Vero, Can
 nabis.
 Necklace-weed, Acta.
 Nettle, Boeh, Urt.
 Nightshade, Sola. 2
 Nine-bark, Spir. 6
 Nitweed, Saro.
 Nonesuch, Med.
 Nutmeg flower, Nig.

- O.
Oak, *Quercus*.
Oak of Jerusalem, *Chen*
Oats, *Avena*. [6
Oil-nut, *Hami*.
Oily-grain, *Sesa*.
Okra, *Hib*. 7
Olive, *Olea*.
Onion, *Allium*. 6
Orach, *Atrip*.
Orange root, *Hydras*.
Orange tree, *Cit*.
Orchis, *Hab. List. Orc*.
Orpine, *Sed. Penth*.
Oxeye, *Buph. Heliop*.
- P.
Painted cup, *Barts. Euc*
Panic grass, *Pani*.
Parnassus, *Parn*.
Parsley, *Aet. Api*.
Parsnip, *Hera. Past*.
Partridge berry, *Mitc*.
Partridge pea, *Cass*.
Passion-flower, *Pas*.
Patience, *Rum*. 12
Pea, *Pisum. Lat*.
Pear, *Pyrus*. 3
Pearl-wort, *Sagina*.
Pellitory, *Pari*.
Pencil-flower, *Styl*.
Pencil-pod, *Hosackia*.
Pennycress, *Thl*.
Pennyroyal, *Hedeo*.
Pennywort, *Hydroco*.
Ob.
Peony, *Pae*.
Pepper, *Piper*.
Pepper-bush, *And*. 5
Pepper-grass, *Lepi*.
Pepper-root, *Den*.
Pepperidge, *Nys*.
Peppermint, *Menth*. 5
Periwinkle, *Vin*.
Perrimon, *Diosp*.
Peter's wort, *Ascy*.
Pheasant-eye, *Adoni*.
Pickerell-weed, *Pon*.
Pigeon-berry, *Phyt*.
Pigmy-weed, *Tillae*.
Pignut, *Carya*.
Pig-weed, *Chen*. 2
- Pimpernel, *Ana. Lind*.
Ver.
Pine, *Pinus*.
Pink, *Dian*.
Pink-root, *Spig*.
Pine weed, *Saro*.
Pinxter blomache, *Aza*.
Pin-weed, *Lech*. [6
Pipe-wort, *Erioca*.
Plane-tree, *Plat*.
Plantain, *Plan. Par*.
Pleurisy root, *Ascl*.
Piow-wort, *Cony*.
Plum, *Prun*. 21
Poison vine, *Rhus*. 6
Poke-weed, *Phyt*.
Polyanthus, *Narc*. 2
Pomegranate, *Pun*.
Pond-lily, *Nym*.
Pond-weed, *Potam*.
Poplar, *Pop*.
Poppoose-root, *Caul*.
Poppy, *Papa*.
Potatoe, *Sola*. 5
Poverty grass, *Aris*.
Prickly ash, *Zan*.
Prickly pear, *Cact*.
Pride-weed, *Erig*.
Prim, *Ligus*.
Primrose, *Pri*.
Prince's feather, *Poly*. 24
Prince's pine, *Chim*.
Puccoon, *Bats*.
Puff-ball, *Lycop*.
Pumpkin, *Cucur*. 4
Purslane, *Cryp. Portu*.
Putty-root, *Aple*.
Pyramid flower, *Fras*.
- Q.
Quack-grass, *Ayrop*.
Quaking-grass, *Briza*. 1
Queen of the meadow,
Spir. 12
Quickset, *Crate*. 12
Quill-wort, *Isoetes*.
Quince, *Pyrus*. 5
- R.
Rabbit-foot, *Trifo*. 5
Radish, *Raph*. 2
Rag-wort, *Seni*.
- Raspberry, *Rubus*.
Rattlesnake fern, *Botr*.
Rattlesnake-grass, *Briz*. 2
Rattlesnake leaf, *Good*.
Rattle-box, *Crotola*.
Red-bud, *Cer*.
Red-root, *Cel*.
Red pepper, *Caps*.
Red-top, *Agros*. 2
Reed-grass, *Arun*.
Reed-mace, *Tuph*.
Rhubarb, *Rhe*.
Ribbon grass, *Phal*. 1
Rib-wort, *Plan*. 2
Rice, *Oryza*.
Rice-grass, *Leer*.
Rich-weed, *Col*.
Rocket, *Bar. Hes*.
Rock-rose, *Cistus*.
Rose, *Rosa*.
Rose-bay, *Rhod*.
Rose-campion, *Agroste*.
Rosemary, *And. Ros*.
Rue, *Ruta*.
Rush, *Equi*.
Ruta-baga, *Bras*. 3
Rye, *Secale*.
- S.
Sacred bean, *Nel*.
Saffron, *Carth*.
Safflower, *Car*.
Sage, *Salvia*.
Sallad, *Lac*.
Salsify, *Trag*.
Salt-grass, *Lim*.
Salt-wort, *Salso*.
Samphire, *Salic*.
Sanicle, *Sani*.
Sand myrtle, *Leiop*.
Sand-wort, *Avena*.
Sarsaparilla, *Arali*.
Sassafras, *Lau*. 3
Satyr, *Haben*.
Savin, *Juni*. 3
Savory, *Sature*.
Saxifrage, *Saxi*.
Scabious, *Scab*.
Scabish, *Oenoth*.
Scorpion weed, *Myoso*. 1
Scouring rush, *Equi*. 2
Screwstem, *Barto*.

- Scrophula weed, Good.
 Sculcap, Scutel.
 Scurvy-grass, Coch. 3
 Sea-rocket, Bun.
 Seed-box, Lud.
 Seeded plum, Dios.
 Sedge, Carex.
 Self-heal, Prun.
 Seneca grass, Hiero.
 Senna, Cass.
 Sensitive briar, Schran.
 Sensitive fern, Ono.
 Sensitive plant, Cass.
 Sesame grass, Trip.
 Shadbush, Aron. 2
 Shag-walnut, Cary. 2
 Shallot, Allium. 10
 Shell-flower, Moluc.
 Sheep-berry, Vibur. 3
 Shepherd's purse, Thlas
 Shin-leaf, Pyro.
 Shin-wood, Taxus.
 Shot-bush, Ara. 1
 Side-saddle, Sara.
 Silk-grass, Yucca.
 Simpler's joy, Verb. 2
 Single-seed cucumber,
 Sicy.
 Skunk-cabbage, Icto.
 Sleek-leaf, Leio.
 Sloe, Prunus. 17
 Smellage, Ligusti.
 Smut, Uredo.
 Snail-shell, Medi. 5
 Snake-head, Chel.
 Snake-root, Asa. Cim.
 Mac.
 Snake-weed, Ser.
 Snapdragon, Ant.
 Sneezewort, Achil. 2
 Snow-ball, Vibur. 12
 Snow-drop, Al. Gal.
 Soap-wort, Sapo.
 Solomon-seal, Conv. 8
 Sorrel, Rum. 9
 Sour-gun, Nys.
 Southern-wood, Arte. 9
 Spearmint, Ment. 4
 Spear-wort, Ran. 1
 Speedwell, Vero.
 Spice-bush, Laur. 2
 Spice root, Dal.
 Spider-wort, Trad.
 Spikenard, Aral. 3
 Spinach, Spin.
 Spindle-tree, Euon.
 Spleen amaranth, Am.
 Spleen-wort, Aspl.
 Spring-beauty, Clay.
 Spring cress, Ara, Car.
 Spruce, Pinus. 2
 Spur-stem, Villar.
 Spurge, Euphor.
 Spurry, Sper.
 Squash, Cucur. 1
 Squaw-root, Orob.
 Squill, Scilla.
 Staff-tree, Celas.
 Stag-horn, Rhus.
 Star-flower, Aster.
 Star-grass, Hyp.
 Star of Bethlehem, Or-
 nith.
 Star-wort, Aster.
 Steen-crout, Lithos. 1
 Steeple-weed, Spirac.
 Stitch-wort, Stella.
 Stone-crop, Sedum. 6
 Strawberry, Frag.
 Strawberry-blite, Bli.
 Succory, Cicho.
 Sugar-cane, Sacch.
 Sulphur-wort, Peuce.
 Sultana, Centa.
 Sumach, Rhus.
 Summer-grass, Hiero.
 Sundew, Dros.
 Sun-drops, Oeno.
 Sunflower, Heleni.
 Swallow-wort, Asc.
 Sweet-weed, Hibis.
 Sweet-briar, Rosa. 8
 Sweet-cicely, Urasp.
 Sweet-fern, Comp.
 Sweet-flag, Acor.
 Sweet-gale, Myric.
 Sweet-gum, Liqu.
 Sweet-pea, Lathy.
 Sweet-potatoe, Convo. 5
 Sweet-tree, Acer. 5
 Sweet vernal grass,
 Anth.
 Sweet-william, Dia. 2
 Swine's cress, Coro.
 Sycamore, Plat.
 Syringa, Phila.

 T.
 Tamarack, Pin. 15
 Tansy, Tana.
 Tape-grass, Valis.
 Tare, Vicia.
 Tea, Thea.
 Teasel, Dipsa.
 Thistle, Cnic.
 Thimble weed, Anem.
 Thimble berry, Rubus. 8
 Thorn, Crat.
 Thorn-apple, Datu.
 Thoroughwax, Bupleu.
 Thoroughwort, Eup.
 Thread-foot, Podo.
 Three-birds, Antir. 4
 Three-seed leek, Alli. 5
 Thrift, Stat.
 Thyme, Thy.
 Tickweed, Coreo.
 Timothy grass, Phle. 2
 Toad-flax, Antir.
 Tobacco, Nico.
 Tomatoes, Sola. 6
 Toothache bush, Zanth
 Tooth-root, Dent.
 Touch-me-not, Impa.
 Touch-wood, Bole.
 Trailing arbutus, Epig.
 Traveler's joy, Clem.
 Tread-softly, Jat.
 Tree primrose, Oeno.
 Tree-weed, Lyce.
 Treefoil, Trifo.
 Trickle, Den.
 Trumpet-flower, Bign.
 Trumpet-weed, Eup.
 Tuberosa, Polya.
 Tulip, Tul.
 Tulip-tree, Liri.
 Tupelo, Nys.
 Turmeric, Hydr.
 Turnip, Bras. 3
 Turnsol, Helio.
 Tway-blade, Malax.
 Twin-berry, Xyl.
 Twin-leaf, Jeff.

U.

Umbrella grass, Fuir.
 Unicorn plant, Marty.
 Unicorn root, Alet.

V.

Valerian, Polem.
 Vegetable oyster, Tra.
 Venus' fly-trap, Dion.
 Venus looking-glass,
 Cam.
 Venus' pride, Hous.
 Vervain, Ver.
 Vetch, Vicia.
 Violet, Vio.
 Viper's bugloss, Echi.
 Virgin's bower, Clem.

W.

Wake-robin, Trilli.
 Walking-leaf, Aspl.
 Wall-cress, Ara.
 Wall-flower, Cheir.
 Walnut, Cary.
 Water-carpet, Chry.
 Water-cress, Card.
 Water-hemlock, Cicu.
 Water-hemp, Acui.

Water-leaf, Hydr.
 Water-lily, Nup. Nym.
 Water-melon, Cucur. 5
 Water-nymph, Najas.
 Water-oats, Zizan.
 Water-plantain, Alis.
 Water-poplar, Pop. 4
 Water-purslane, Isnar.
 Water-shield, Hyd.
 Water-target, Hyd.
 Wax-bush, Cuph.
 Weed-grass, Cono.
 Whahoo, Ulm.
 Wheat, Triticum.
 Wheat-thief, Litho.
 Whip-grass, Scler.
 White-bush, Andr. 5
 White-cedar, Cupres.
 Thu.
 White-wood, Lirio.
 White-top, Agros. 3
 Whitlow-grass, Draba.
 Whortle-berry, Vacc.
 Wild basil, Pyc.
 Wild indigo, Bapt.
 Wild rice, Ziza.
 Wild rye, Elym.
 Wild oats, Dant.

Willow, Salix.
 Willow-herb, Epilo.
 Wind-flower, Anem.
 Winter-cress, Bar.
 Winter-berry, Prinos.
 Wintergreen, Gaul.
 Wire-grass, Eleu.
 Witch-alder, Foth.
 Witch-hazle, Hama.
 Woad, Isatis.
 Woodbine, Loni.
 Wood-sage, Teu.
 Wood-sorrel, Oxa.
 Wolf's bane, Acon. 2
 Worm-seed, Chcn.
 Wormwood, Artem. 8

Y.

Yam-root, Dios.
 Yarrow, Achil. 1
 Yellow-grass, Cype.
 Yellow-eyed grass, Xy-
 ris.
 Yellow-rattle, Rhin.
 Yellow-root, Xanth.
 Yellow-seed, Thlas. 4
 Yellow star-root. Ale. 2
 Yew, Taxus.





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